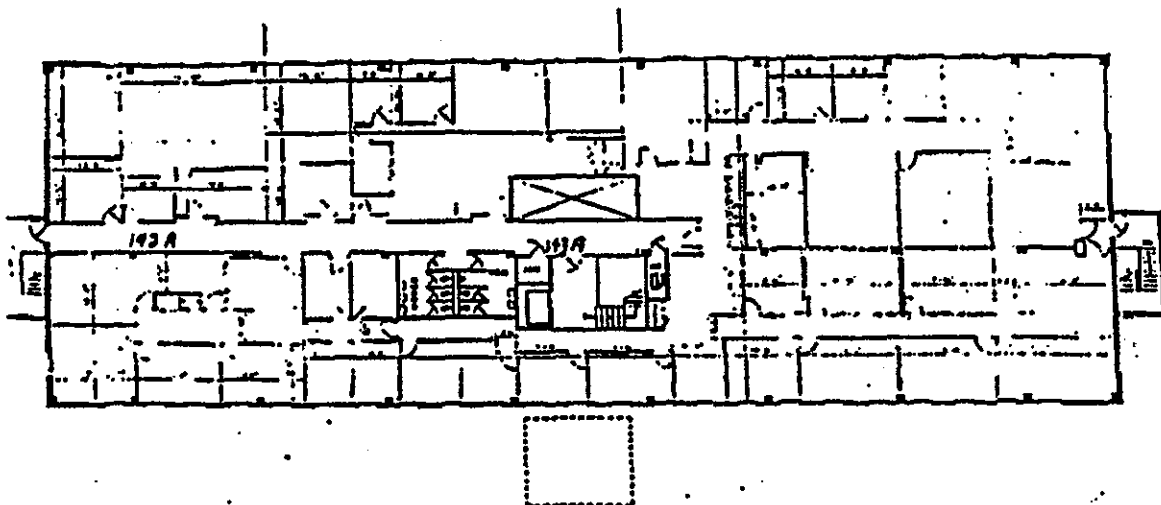


SECOND FLOOR PLAN

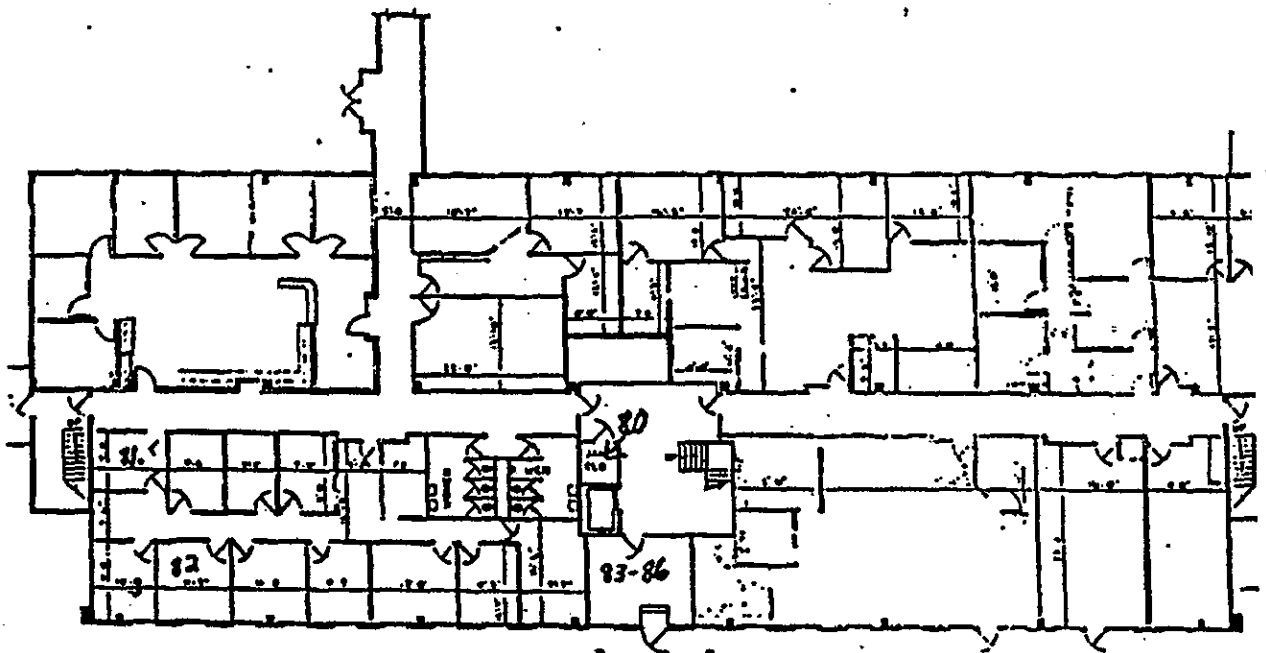
SOUTHDAL E OFFICE CENTRE
8700 FRANCE AVENUE SOUTH
EDINA, MINNESOTA 55438



THIRD FLOOR PLAN

NOT TO SCALE

SOUTHDAL E OFFICE CENTRE
6700 FRANCE AVENUE SOUTH
EDINA, MINNESOTA 55435



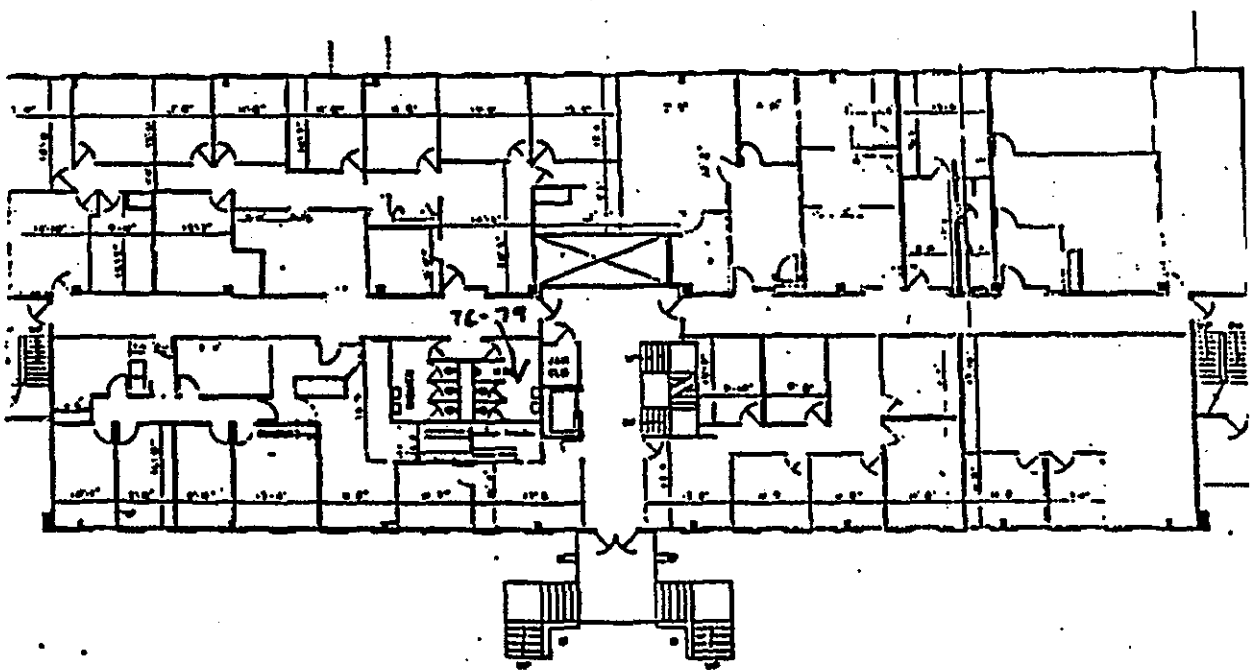
FIRST FLOOR PLAN

--See Plans and Notes--

SOUTHDALE OF
6750 FRANCE AV
EDINA, MINNESOTA

PIS

8001450



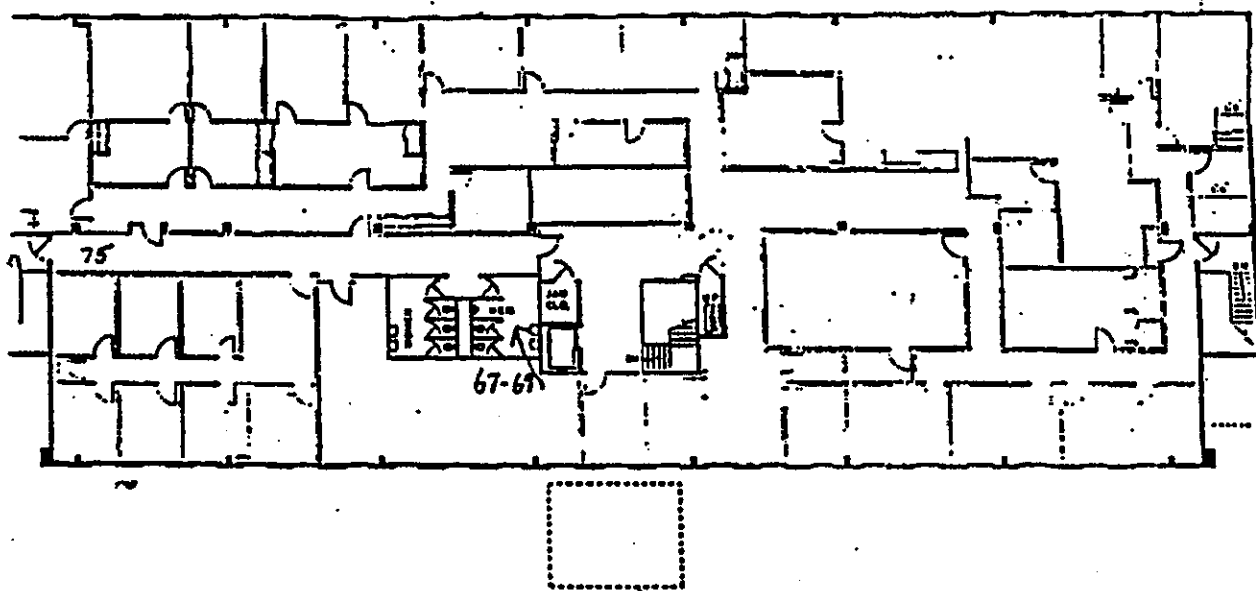
SECOND FLOOR PLAN

--See Plans and Notes--

SOUTHDALE OFF
6750 FRANCE AVE.
EDINA, MINNESOTA

PIS

900145

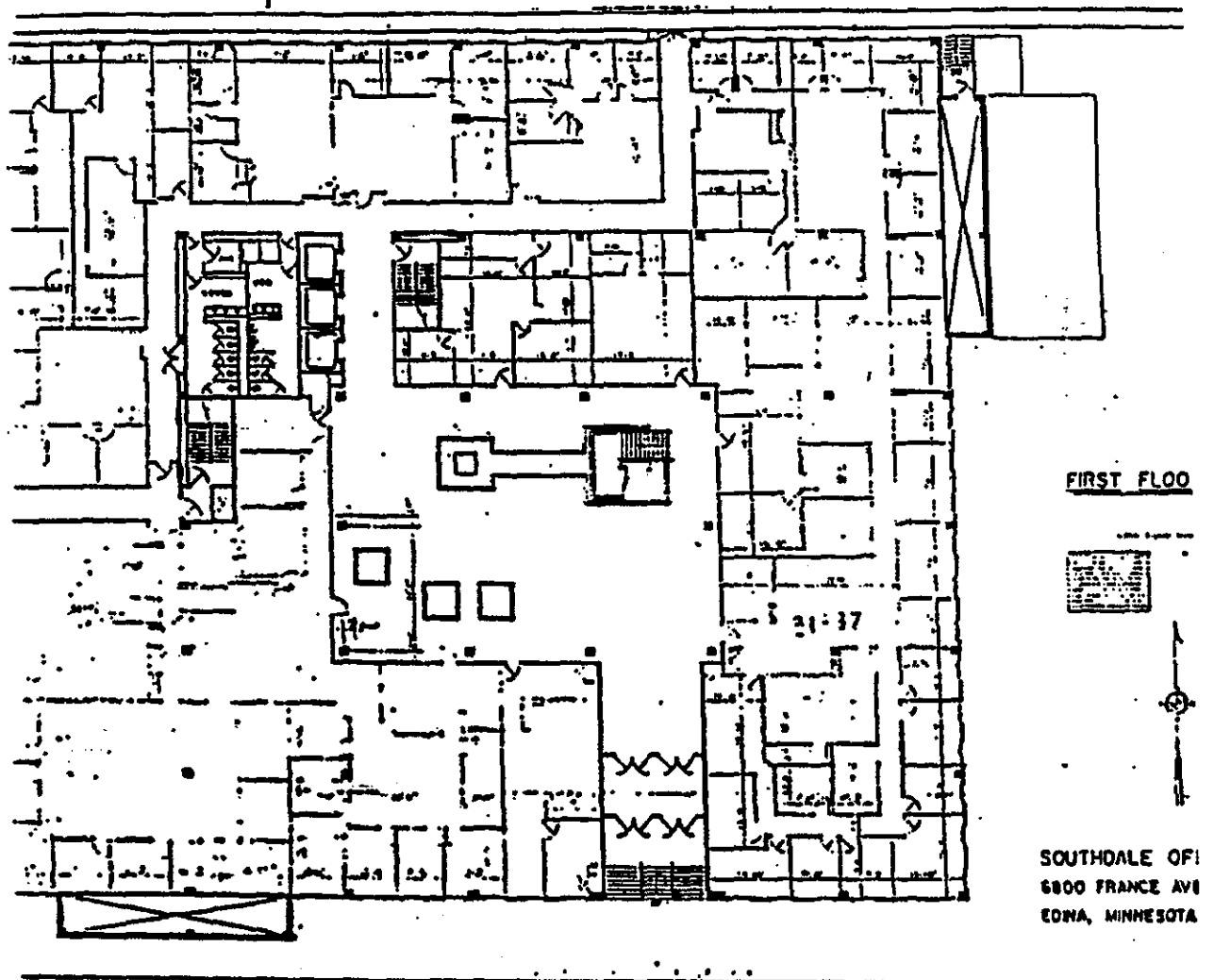


THIRD FLOOR PLAN

SOUTHDAL E OFFI
6750 FRANCE AVEN
EDINA, MINNESOTA

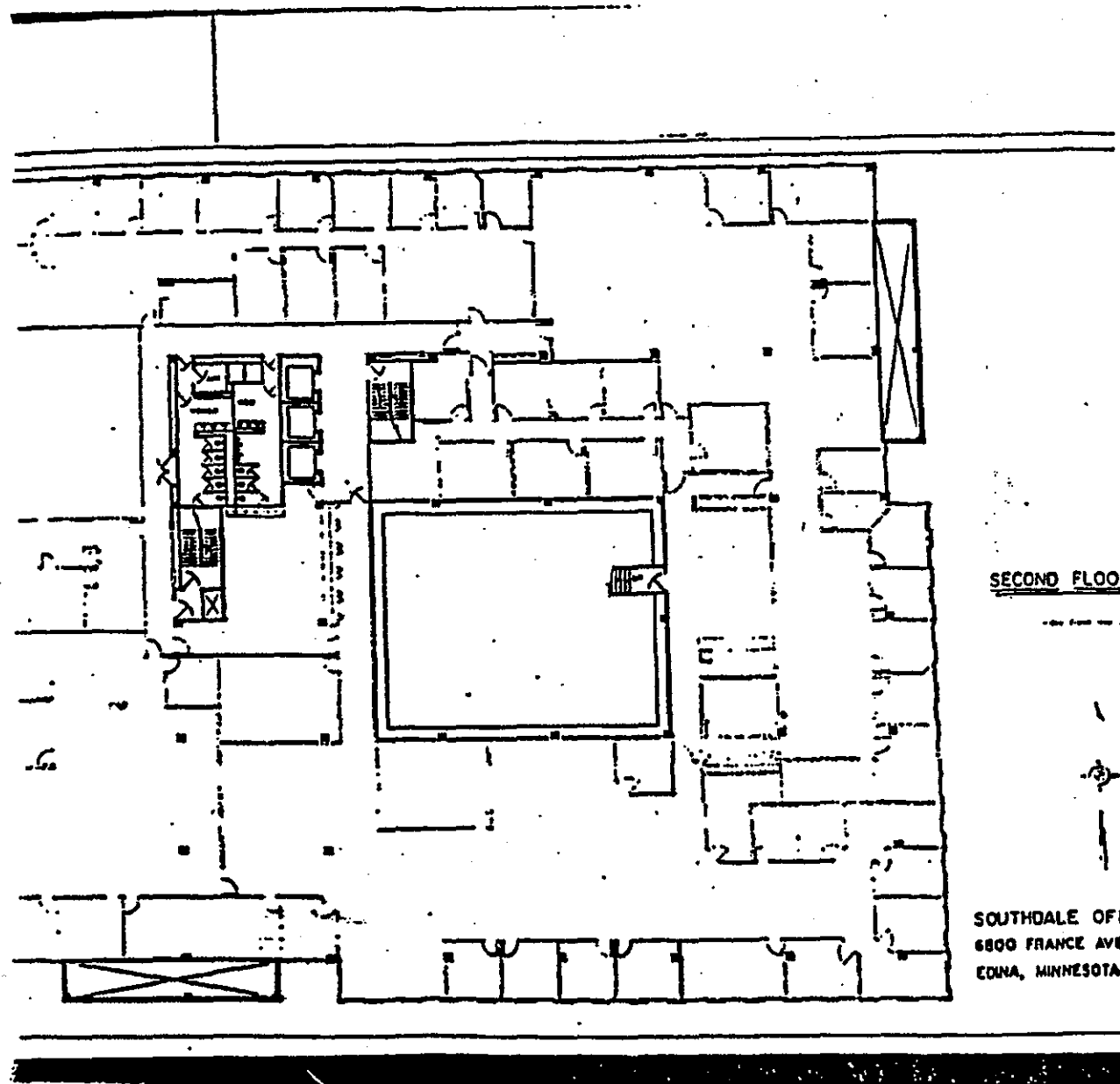
PIS

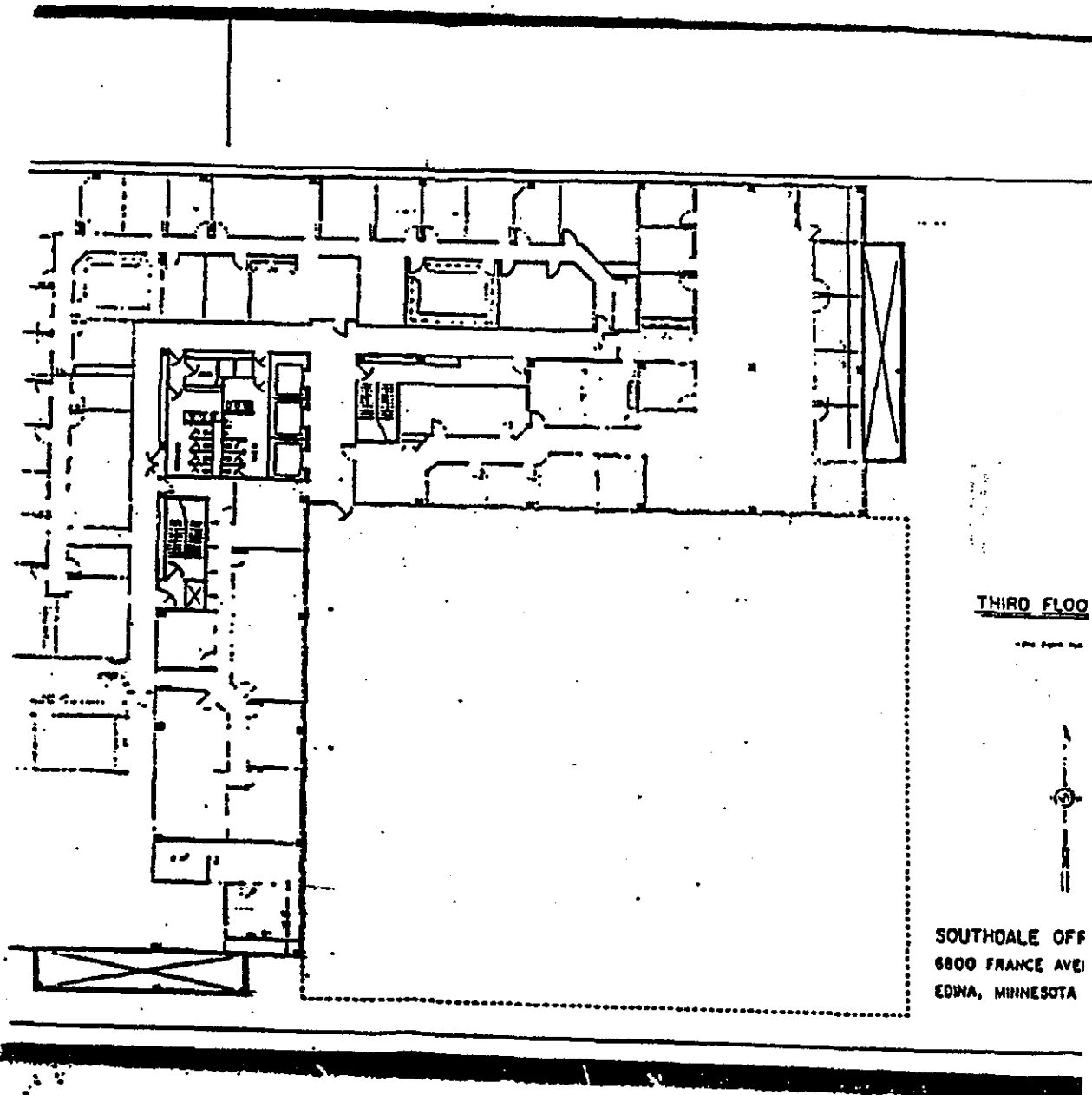
8001458

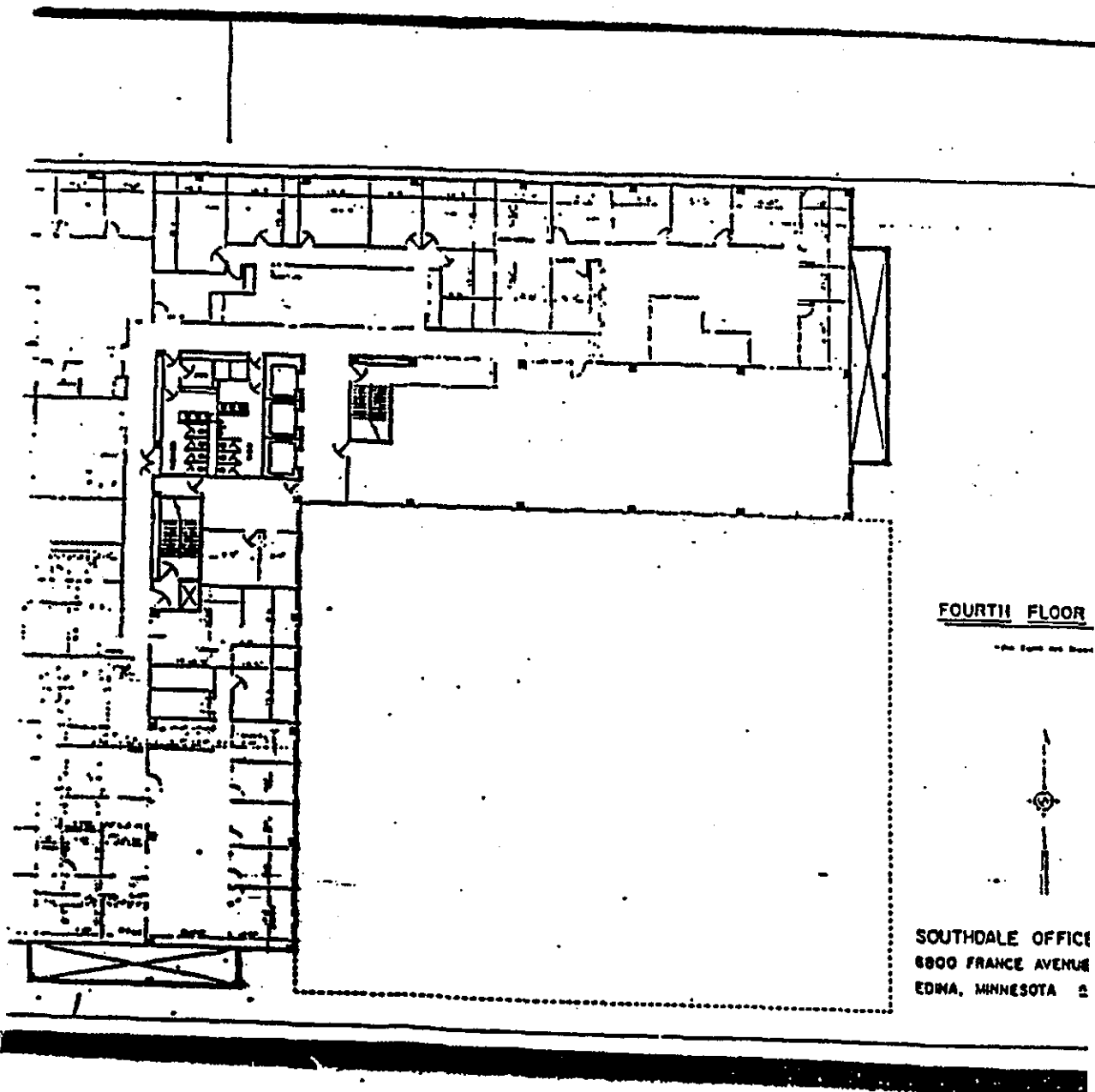


PIS

S00145

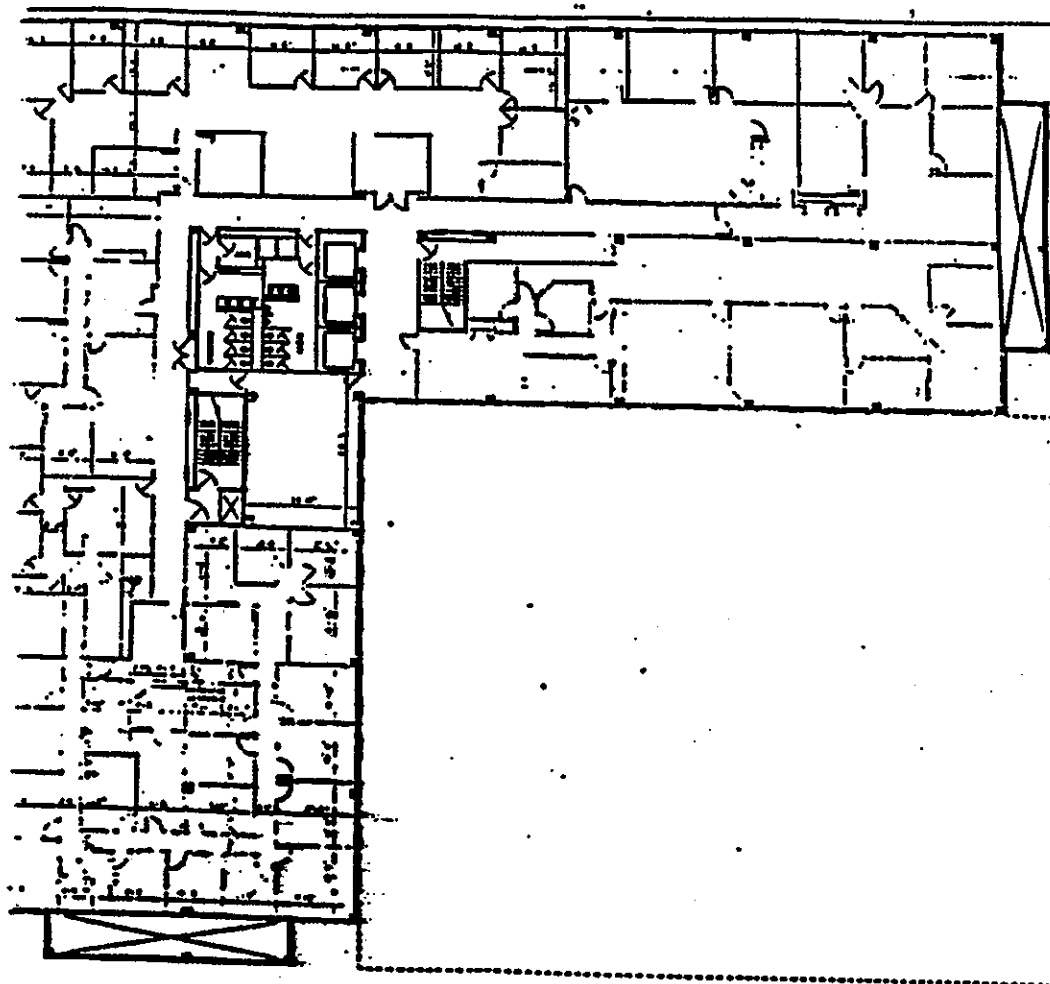






PIS

8001463

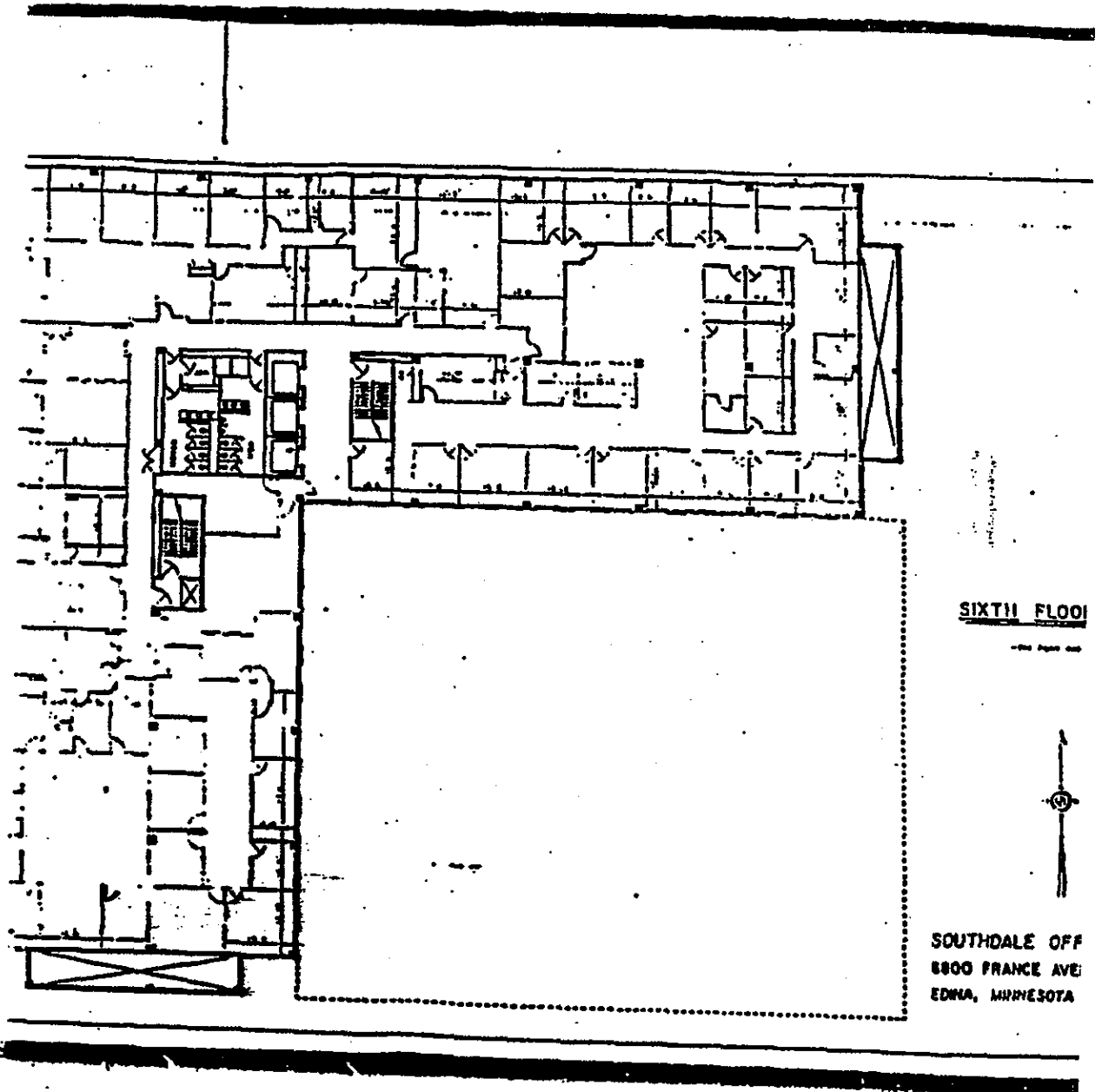


FIFTH FLOOR

SOUTHDALE OF
6800 FRANCE AVE
EDINA, MINNESOTA

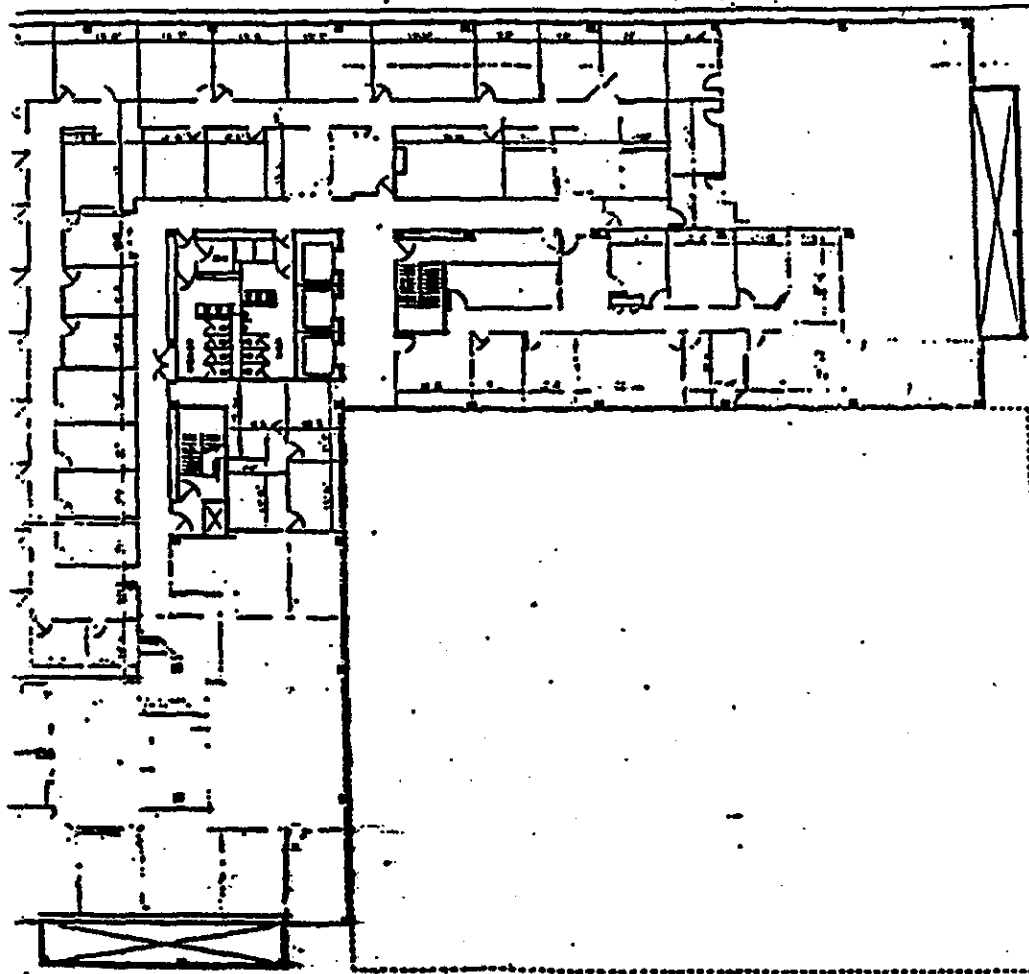
PIS

S00146



PIS

800146

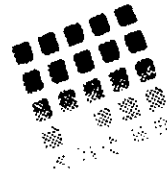


SEVENTH FLOOR

SOUTHDALE OFFICE
6800 FRANCE AVENUE
EDINA, MINNESOTA

PIS

8001465



MATERIALS
ANALYTICAL
SERVICES

March 25, 1991

RE: Southdale Office Complex
Edina, Minnesota

The constituent analysis of additional fireproofing samples for the above-referenced project supplements my June 25, 1990 opinion and confirms that the samples analyzed are Mono-Kote 3, which was manufactured by W. R. Grace.

Worksheets reflecting the analysis are attached.



William E. Longo, Ph.D.

3597 Parkway Lane • Suite 250
Norcross, Georgia 30092
(404) 448-3200 FAX (404) 368-8256

PIS 00111041

BUILDING: Southdale Office Complex
Edina, Minnesota

The following bulk samples from the above-referenced building were analyzed and were used to supplement the opinion regarding the manufacturer and product.

<u>Bulk Samples</u>	<u>Sample Location</u>	<u>Collected By</u>
1	6th Floor, Suite 674	LAI
2	6th Floor, Suite 676	LAI
3	5th Floor, Suite 555 North Side	LAI
4	5th Floor, Suite 555 South Side	LAI
5	4th Floor, Suite 425	LAI
6	4th Floor, Suite 410	LAI
7	3rd Floor, SW Corner 1st Column	LAI
8	3rd Floor, SW Corner End Beam on South Side	LAI
9	2nd Floor, Suite 243 2nd Column from North	LAI
10	2nd Floor, Suite 243 West Wall Beam	LAI
11	1st Floor, Suite 165 2nd Column, 2nd Row from South End	LAI
12	1st Floor, Suite 165 South Side	LAI
13	Basement Storage by Room #22	LAI
14	Parking Garage by Stall #40	LAI

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-1Date: 7/17/90Project Name: PRU / Southdale officeAnalyst: J. McKimSample Identification: 6800 France Ave #16th FloorGross Visual Description: Beige with fine fibers gold flakes and
books bound in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.53/1.54
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Other	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Other	

Binders	53
---------	----

Abundant Gypsum, fine grained aggregateEFFERVESCENCE: none - weak in isolated areas

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-2Date: 7/17/90Project Name: PRU / Southdale officeAnalyst: J. MollnerSample Identification: 6800 France Ave #26th FloorGross Visual Description: Beige with fine f. has, gold flakes and
books bound in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.5511 / 1.541
Sign of Elongation	+
Extinction	0
Birefringence	10.0
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Other	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Other	

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: None - weak in isolated areas

COMMENTS:

MSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2468-3Date: 7/17/90Project Name: PRU / Southdale OfficeAnalyst: J. McHughSample Identification: 6800 France Ave # 3 5th FloorGross Visual Description: Beige with fine l. bers, gold flakes and
looks bound in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	Wavy		
Pleochroism	NO		
Refractive Index	1.551/1.544		
Sign of Elongation	+		
Extinction	0		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Other	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Other	

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: none - weak in isolated areasCOMMENTS: MSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-4Date: 7/17/90Project Name: PRU / Southdale officeAnalyst: J. MartinSample Identification: 6800 France Ave #4 5th FloorGross Visual Description: Beige with fine fibers, gold flakes and
darks found in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	Wavy		
Pleochroism	no		
Refractive Index	1.55/1.54		
Sign of Elongation	+		
Extinction	0		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Other	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Other	

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: none - weak in isolated areas

COMMENTS:

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-5Date: 7/17/90Project Name: PRU / Southdale officeAnalyst: J. McArthurSample Identification: 6800 France Ave #5 4th FloorGross Visual Description: Beige with fine fiber, gold flakes and spots
found in a fine grained matrix**Optical Data for Asbestos Identification**

Morphology	.....	<u>Wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.55-1.56</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>Chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	.....
Crocidolite	.....	.....
Tremolite/Actinolite	.....	.....
Anthophyllite	.....	.....

OTHER FIBROUS COMPONENTS:

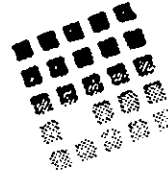
Mineral/Rock wool	.....	.....
Fibrous glass	.....	.....
Cellulose	.....	.....
Synthetic	.....	.....
Other	.....	.....

NON-FIBROUS COMPONENTS:

Perlite	.....	.....
Vermiculite	.....	<u>35</u>
Other	.....	.....

Binders	<u>53</u>
---------	-------	-----------

Abundant Gypsum, fine grained aggregateEFFERVESCENCE: none - weak in isolated areas**COMMENTS:**N/SO



MATERIALS ANALYTICAL SERVICES, INC.
3597 Parkway Lane, Suite 250
Norcross, GA 30092
404/448-3200

TEM ANALYSIS: BULK ANALYSIS

PROJECT: PRUDENTIAL; SOUTHOALE OFFICE COMPLEX 120.61
SAMPLE NUMBER: M2468-5
SAMPLE ID: #5 4TH FLOOR SUITE 425

DATE OF ANALYSIS: 8/20/90

ANALYST: W. B. Cych

Asbestos Minerals: CHRYSTICE (EDS)(DIFF)

Other Components: VERTICULITE (EDS)
GYPSUM (EDS)(DIFF)
CALCITE (EDS) * SMALL AMOUNT

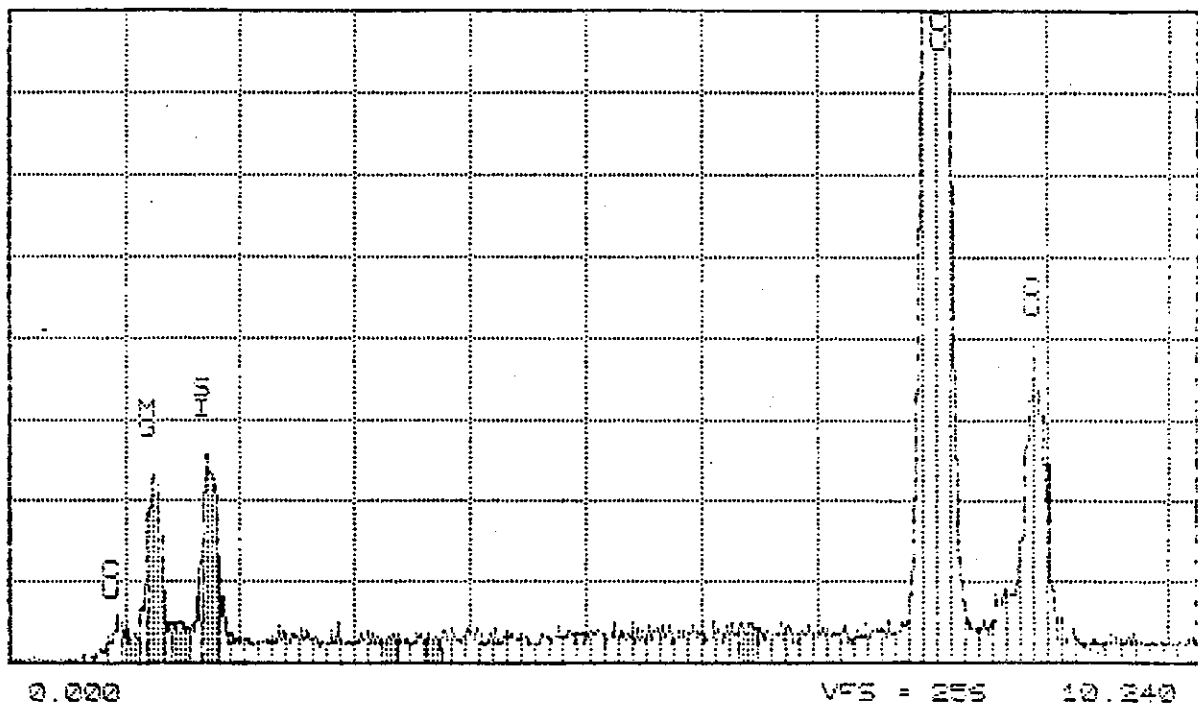
Comments:

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 15:20

Cursor: 0.000keV = 0

ROI (SIK α) 1.660: 1.810=1012



0.000

VFS = 256

10.240

21

M2468-5, CHRYSOTILE

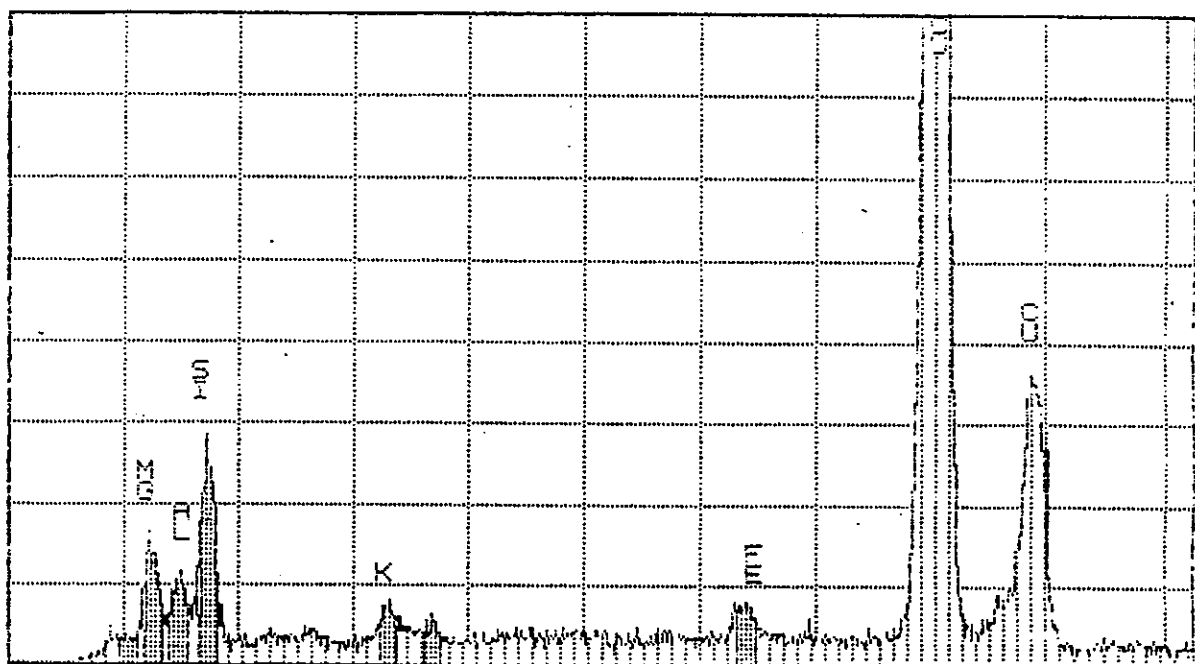
PIS 00111049

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 15:22

Cursor: 0.000keV = 0

ROI (SIKα) 1.660: 1.810=1031



0.000

VFS = 256

10.240

21

M2468-5, VERMICULITE

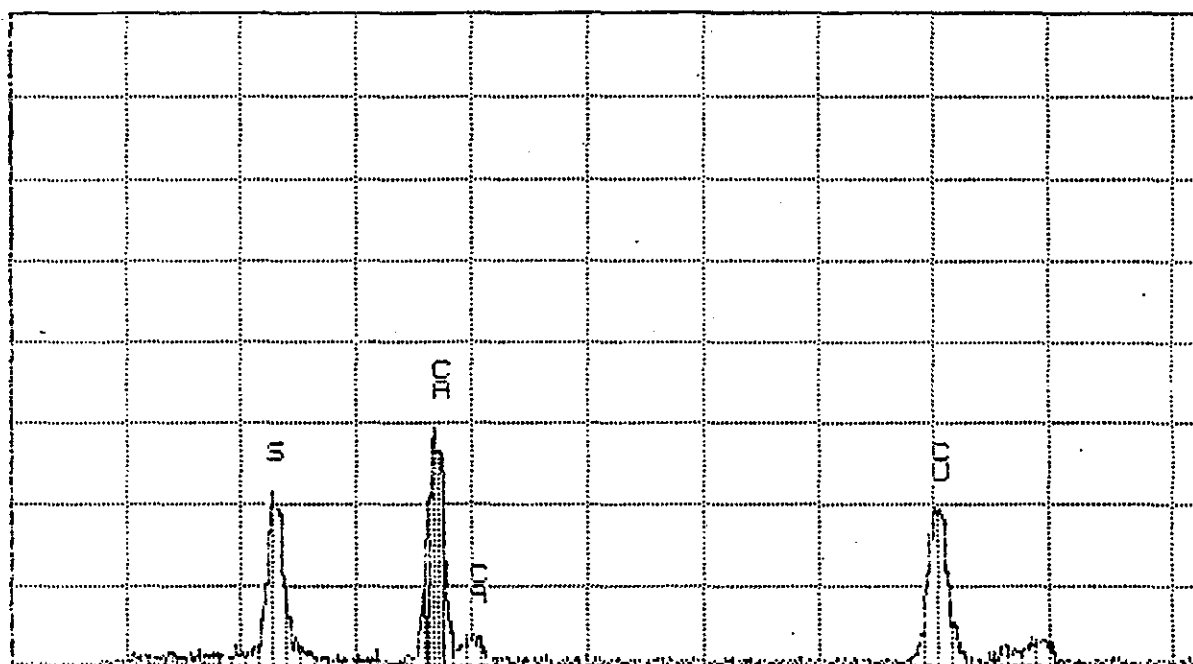
PIS 00111050

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 15:23

Cursor: 0.000keV = 0

ROI (SIK%) 1.650: 1.810=52



0.000

VFS = 256

10.240

16

M2463-5, GYPSUM

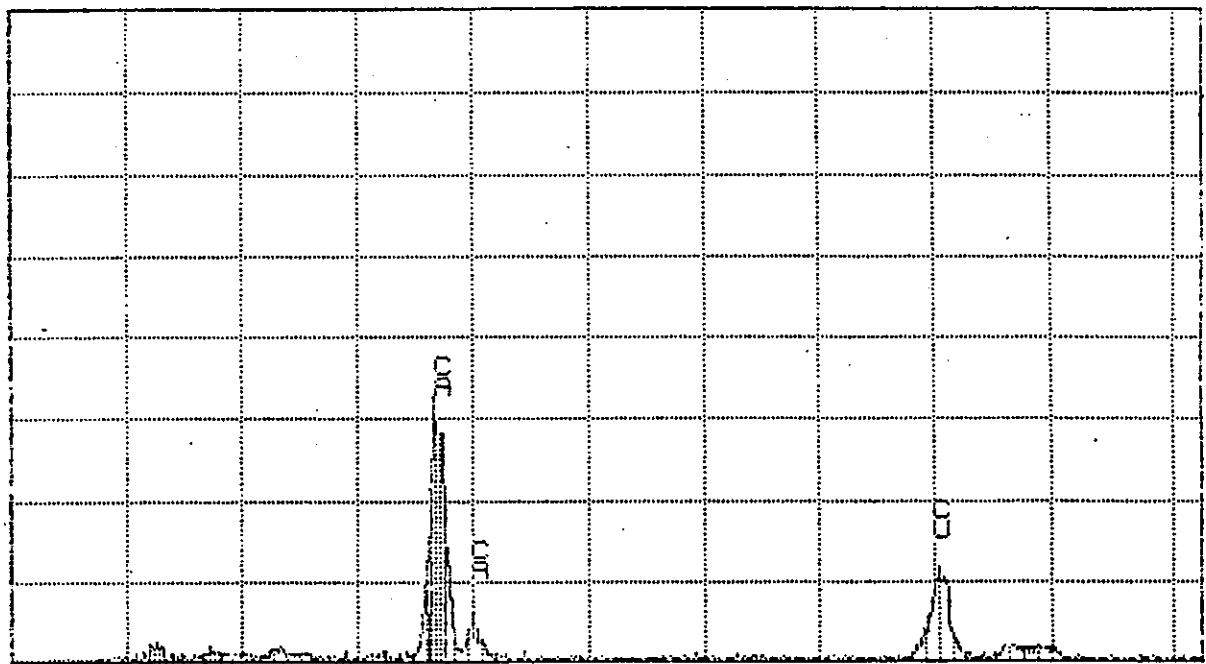
PIS 00111051

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 16:24

Cursor: 0.000keV = 0

ROI (SIK α) 1.650: 1.810=60



0.000

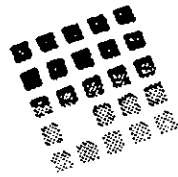
VFS = 256

10.240

4

M2468-5, CALCITE

PIS 00111052

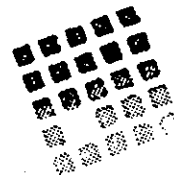
MATERIALS
ANALYTICAL
SERVICES

ADDITIONAL BULK ANALYSIS

Sample # 112468-5Analyst J. K. A.Date 08/09/90

ACID DISSOLUTION

(1) Petri dish plus sample:	<u>8.3848</u> g
(2) Petri dish minus sample:	<u>7.3342</u> g
(3) Original sample weight:	<u>1.0506</u> g
(4) Filter weight:	<u>0.0599</u> g
(5) Clean petri dish weight:	<u>7.3388</u> g
(6) Final sample weight plus filter and petri dish:	<u>7.8228</u> g
(7) Final sample wt: ((6) - [(4) + (5)])	<u>0.4241</u> g
(8) Percent residue wt: ((7)/(3) x 100)	<u>40.4</u> %
(9) Amount in solution: (100 - (8))	<u>59.6</u> %



MATERIALS
ANALYTICAL
SERVICES

ADDITIONAL BULK ANALYSIS

STARCH VERIFICATION

Sample # 172468-5

Analyst W.D. Egel

Date 8/17/90

1) Sample Analyzed before after acid dissolutions

Starch observed

(no) ✓
yes _____

Iodine test
(ceiling tile only)

positive _____
negative _____

PIS 00111054

3597 Parkway Lane • Suite 250
Norcross, Georgia 30092
(404) 448-3200

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-6Date: 7/17/90Project Name: PRU1 Southdale OfficeAnalyst: J. McNameeSample Identification: 6800 France # 6 4th FloorGross Visual Description: Beige with fine fibers, small flakes and rocks
found in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	.....	<u>wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.55/1.54</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>Chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile 12

Amosite _____

Crocidolite _____

Tremolite/Actinolite _____

Anthophyllite _____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool _____

Fibrous glass _____

Cellulose _____

Synthetic _____

Other _____

NON-FIBROUS COMPONENTS:

Perlite _____

Vermiculite 35

Other _____

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: none - weak in isolated areas

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-7Date: 7/17/98Project Name: PRV / Southdale officeAnalyst: J. MartinSample Identification: 6800 France #7 3' FloorGross Visual Description: Beige with fine fibers, gold flakes and bones
Dev'd in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	.....	wavy	.....	.....
Pleochroism	.....	no	.....	.....
Refractive Index	.....	1.55/1.56	.....	.....
Sign of Elongation	.....	+	.....	.....
Extinction	.....	0	.....	.....
Birefringence	.....	low	.....	.....
Melt	.....	no	.....	.....
Fiber Name	.....	Chrysotile	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	12
Amosite	.....
Crocidolite	.....
Tremolite/Actinolite	.....
Anthophyllite	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....
Fibrous glass	.....
Cellulose	.....
Synthetic	.....
Other	.....

NON-FIBROUS COMPONENTS:

Perlite	.....
Vermiculite	.....	35
Other	.....

Binders 53

Abundant Gypsum, fine grained aggregateEFFERVESCENCE: None - weak in isolated areas

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-8Date: 7/17/90Project Name: PRU / Southdale OfficeAnalyst: J. MohrSample Identification: 6800 France # 8 3rd FloorGross Visual Description: Beige with fine fibers, gold flakes and
looks bound in a fine grained matrix**Optical Data for Asbestos Identification**

Morphology	.....	<u>wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.571/1.511</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>(0.2)</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>Chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	.....
Crocidolite	.....	.....
Tremolite/Actinolite	.....	.....
Anthophyllite	.....	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....	.....
Fibrous glass	.....	.....
Cellulose	.....	.....
Synthetic	.....	.....
Other	.....	.....

NON-FIBROUS COMPONENTS:

Perlite	.....	.....
Vermiculite	.....	<u>35</u>
Other	.....	.....

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: None - weak in isolated areas

COMMENTS:

NEO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2468-9Date: 7/7/90Project Name: PRV / Southdale OfficeAnalyst: J. MathewSample Identification: 6800 France #9 2nd FloorGross Visual Description: Beige with fine fibers, gold flakes and bones
in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.55/1.56
Sign of Elongation	h
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

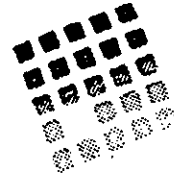
Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Other	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Other	

Binders	53
---------	----

Abundant Gypsum, fine grained aggregateEFFERVESCENCE: None - Weak in Isolated AreasCOMMENTS: NGD



MATERIALS ANALYTICAL SERVICES, INC.
3597 Parkway Lane, Suite 250
Norcross, GA 30092
404/448-3200

TEM ANALYSIS: *BULK ANALYSIS*

PROJECT: *PRUDENTIAL: SOUTHDALE OFFICE COMPLEX: 120.61*
SAMPLE NUMBER: *12468-9*
SAMPLE ID: *79 2ND FLOOR SUITE 243*

DATE OF ANALYSIS: *8/20/90*

ANALYST: *U.B. Egl*

Asbestos Minerals: *CHRYSTILE (EDS) (DIFF)*

Other Components: *VERMICULITE (EDS)*
GYPHUM (EDS) (DIFF)
*CALCITE (EDS) * TRACE OBSERVED (CHRYSTILE ADHERING)*

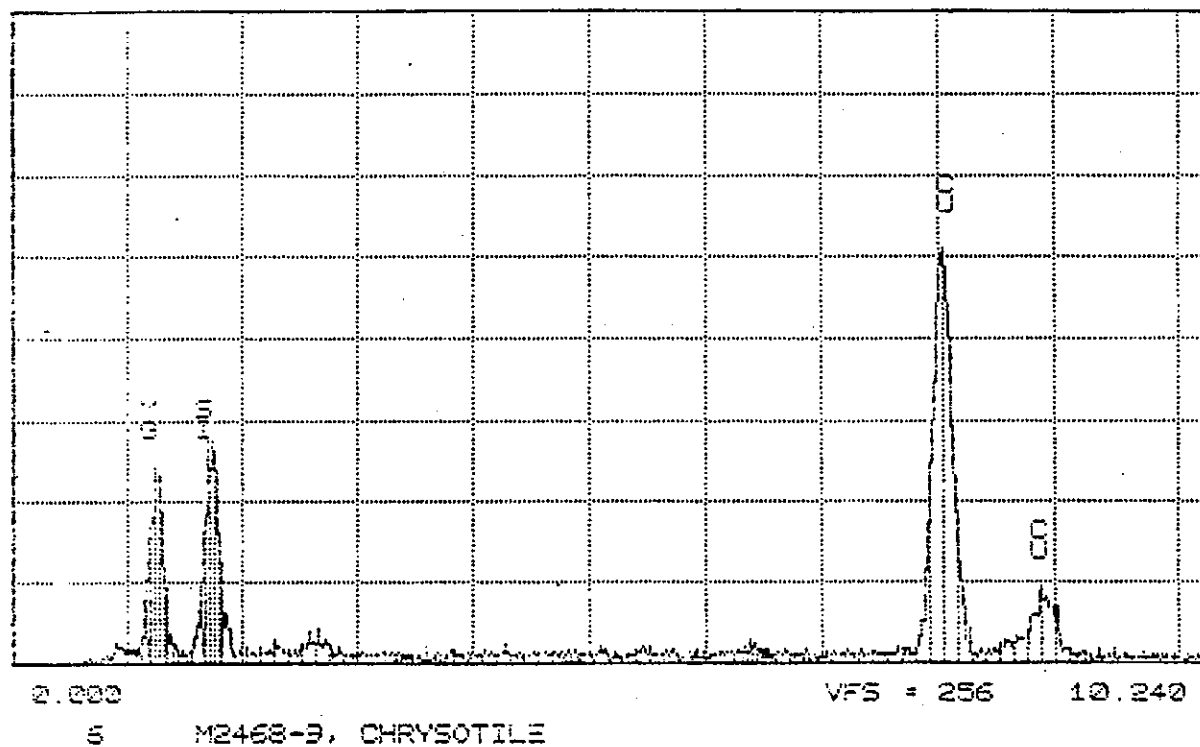
Comments:

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 16:35

Cursor: 0.000keV = 0

ROI (SIKα) 1.550: 1.810=1035

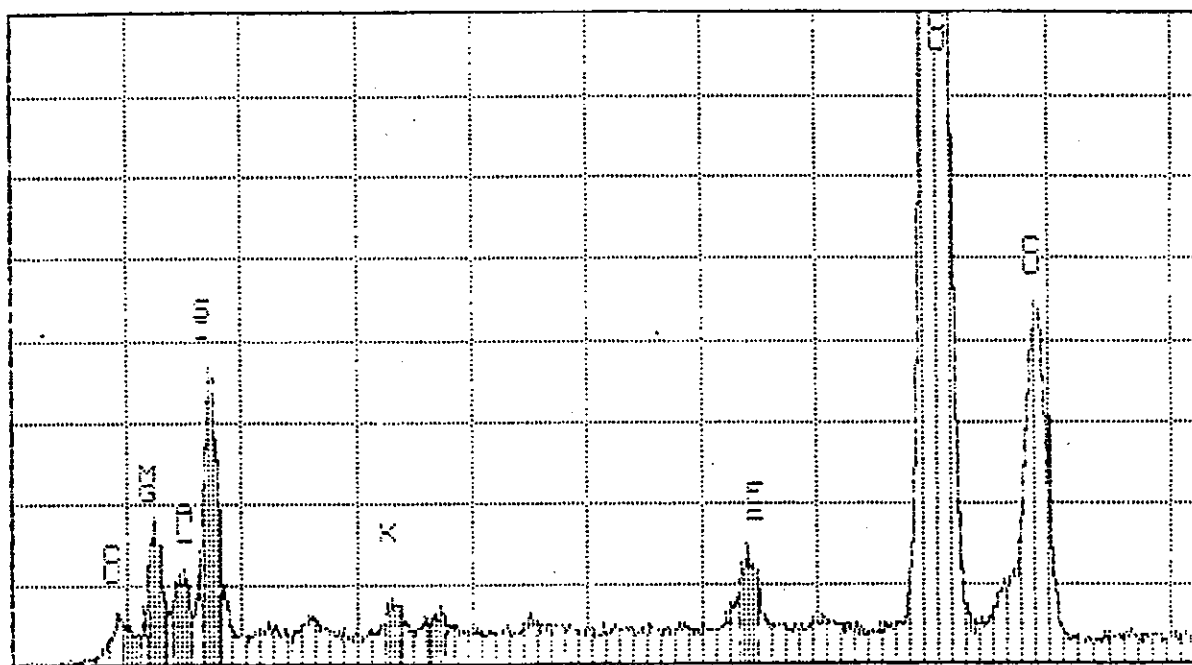


MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 16:39

Cursor: 2.000keV = 0

ROI (SIK α) 1.560: 1.810=2755



0.000

VFS = 512

10.240

70

M2468-9, VERMICULITE

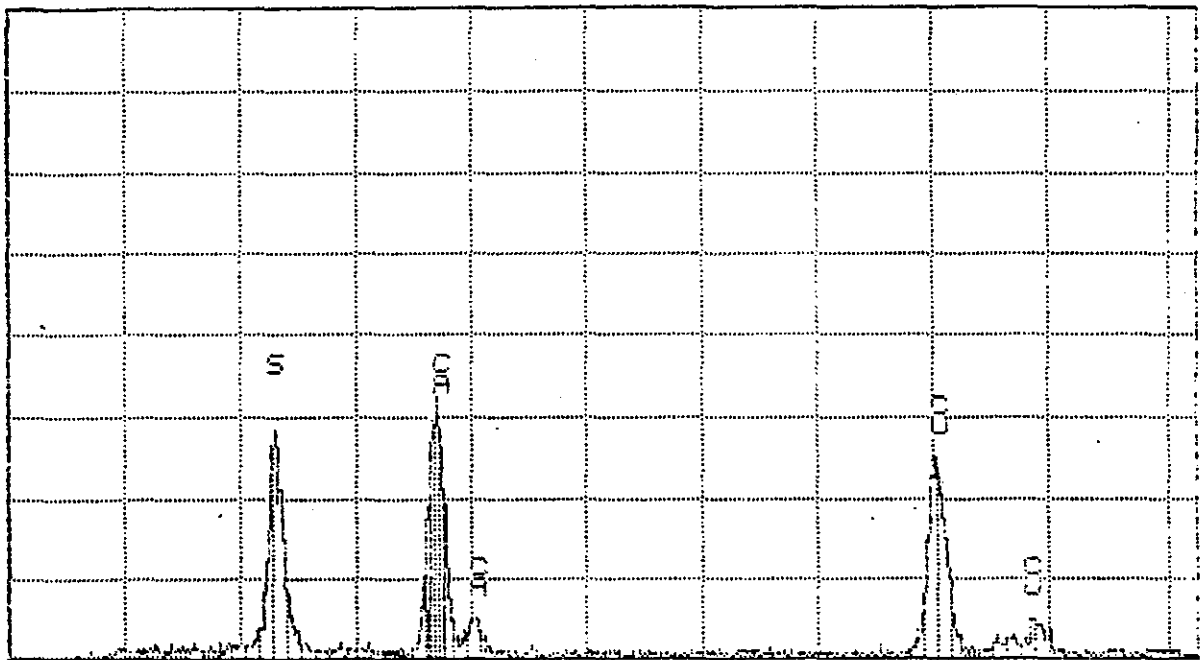
PIS 00111061

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 16:40

Cursor: 0.000keV = 0

ROI (SIKd) 1.550: 1.810=47



0.000

VFS = 255

10.240

S

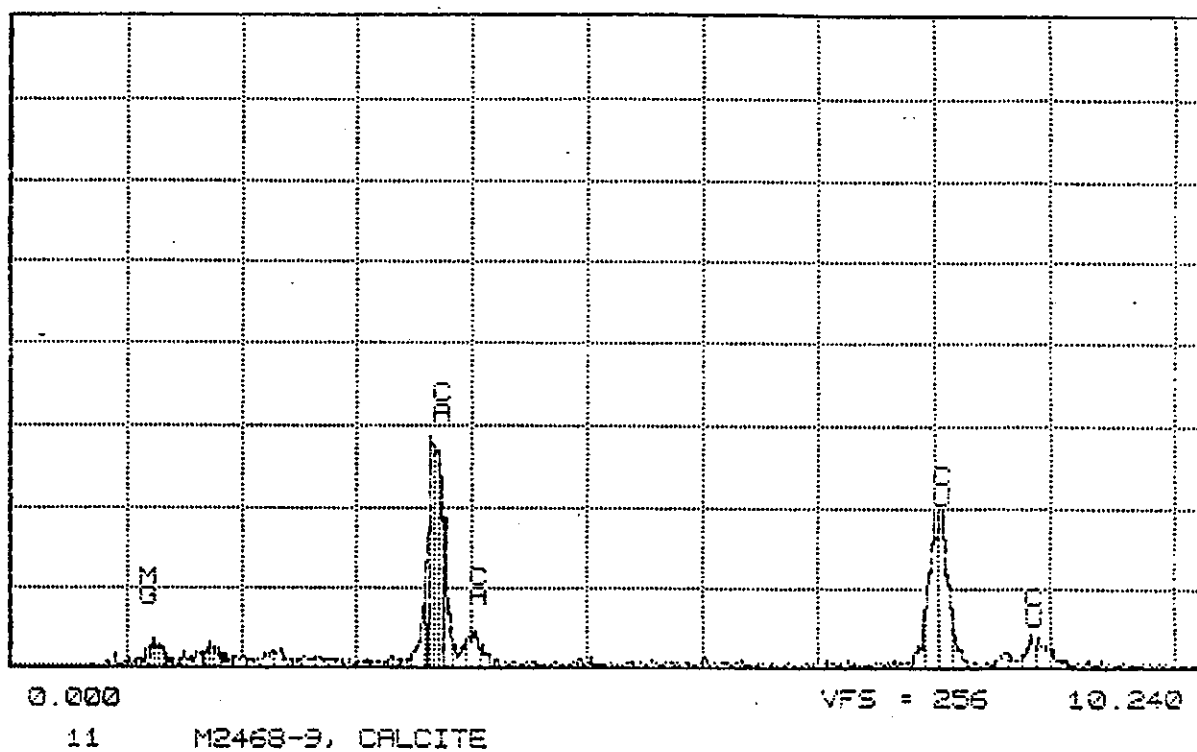
M2468-9, GYPSUM

MATERIALS ANALYTICAL SERVICES

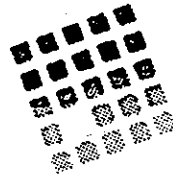
MON 20-AUG-90 16:43

Cursor: 0.000keV = 0

ROI (SiK α) 1.650: 1.810=104



PIS 00111063



MATERIALS
ANALYTICAL
SERVICES

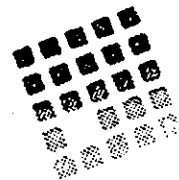
ADDITIONAL BULK ANALYSIS

Sample # 112468-9
Date 08/09/96

Analyst J. F. P.

ACID DISSOLUTION

(1) Petri dish plus sample:	<u>9.2289</u> g
(2) Petri dish minus sample:	<u>8.2722</u> g
(3) Original sample weight:	<u>0.9567</u> g
(4) Filter weight:	<u>0.0583</u> g
(5) Clean petri dish weight:	<u>7.3169</u> g
(6) Final sample weight plus filter and petri dish:	<u>7.7735</u> g
(7) Final sample wt: ((6) - [(4) + (5)])	<u>0.3983</u> g
(8) Percent residue wt: ((7)/(3) x 100)	<u>41.6</u> %
(9) Amount in solution: (100 - (8))	<u>58.4</u> %



MATERIALS
ANALYTICAL
SERVICES

ADDITIONAL BULK ANALYSIS

STARCH VERIFICATION

Sample # 172468-9

Analyst W. B. Eichel

Date 8/17/94

1) Sample Analyzed before/after acid dissolutions

Starch observed

(no) ✓

yes _____

Iodine test
(ceiling tile only)

positive _____

negative _____

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M24kg-10Date: 7/17/90Project Name: PRU Southdale officeAnalyst: J. MottSample Identification: 6800 France #10 2nd FloorGross Visual Description: Beige with fine f. bas, gold flakes and
flakes bound in a fine grained matrix**Optical Data for Asbestos Identification**

Morphology	<u>wavy</u>	. . . . .	<u> </u>
Pleochroism	<u>no</u>	. . . . .	<u> </u>
Refractive Index	<u>1.55/1.54</u>	. . . . .	<u> </u>
Sign of Elongation . . . . .	<u>+</u>	. . . . .	<u> </u>
Extinction	<u>0</u>	. . . . .	<u> </u>
Birefringence	<u>low</u>	. . . . .	<u> </u>
Melt	<u>no</u>	. . . . .	<u> </u>
Fiber Name	<u>chrysotile</u>	. . . . .	<u> </u>

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	<u>12</u>
Amosite	<u> </u>
Crocidolite	<u> </u>
Tremolite/Actinolite	<u> </u>
Anthophyllite	<u> </u>

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	<u> </u>
Fibrous glass	<u> </u>
Cellulose	<u> </u>
Synthetic	<u> </u>
Other	<u> </u>

NON-FIBROUS COMPONENTS:

Perlite	<u> </u>
Vermiculite	<u>35</u>
Other	<u> </u>

Binders	<u>53</u>
-------------------	-----------

Abundant Gypsum, fine grained aggregateEFFERVESCENCE: None - weak in isolated area

COMMENTS:

USA

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-11Date: 7/17/96Project Name: PRU / Southdale officeAnalyst: J. MerinSample Identification: 6800 France # 11 2nd Floor 1st FloorGross Visual Description: Beige with fine f. boss, gold flakes
gold boss bound in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	.....	wavy	.....	.....
Pleochroism	.....	no	.....	.....
Refractive Index	.....	1.59/1.54	.....	.....
Sign of Elongation	.....	+	.....	.....
Extinction	.....	5	.....	.....
Birefringence	.....	low	.....	.....
Melt	.....	no	.....	.....
Fiber Name	.....	chrysotile	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	12
Amosite	.....
Crocidolite	.....
Tremolite/Actinolite	.....
Anthophyllite	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....
Fibrous glass	.....
Cellulose	.....
Synthetic	.....
Other	.....

NON-FIBROUS COMPONENTS:

Perlite	.....
Vermiculite	.....	55
Other	.....

Binders 53

Abundant Gypsum, fine grained aggregateEFFERVESCENCE: none - weak in isolated areas

COMMENTS:

WFO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M-2468-12Date: 7/17/90Project Name: PRU / Southdale officeAnalyst: J. MicalSample Identification: 6800 France #12 1st FloorGross Visual Description: Beige with fine fibers, gold flakes and books bound in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.551 / 1.546
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile 12

Amosite _____

Crocidolite _____

Tremolite/Actinolite _____

Anthophyllite _____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool _____

Fibrous glass _____

Cellulose _____

Synthetic _____

Other _____

NON-FIBROUS COMPONENTS:

Perlite _____

Vermiculite 35

Other _____

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: None - weak in 70% HCl

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-13Date: 7/19/90Project Name: PAU / Southdale officeAnalyst: J. McLeanSample Identification: C800 France #13 BasementGross Visual Description: Beige with fine fibers, gold flakes and
books bound in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	.....	<u>wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.55/1.54</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>Chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	.....
Crocidolite	.....	.....
Tremolite/Actinolite	.....	.....
Anthophyllite	.....	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....	.....
Fibrous glass	.....	.....
Cellulose	.....	.....
Synthetic	.....	.....
Other	.....	.....

NON-FIBROUS COMPONENTS:

Perlite	.....	.....
Vermiculite	.....	<u>35</u>
Other	.....	.....

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: none - weak in isolated areas

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2468-14Date: 7/18/90Project Name: PRU / Southdale officeAnalyst: J. McNeilSample Identification: 6800 France #14 Parking GarageGross Visual Description: Beige with fine fibers, gold flakes and
bocks bound in a fine grained matrix

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.55/1.54
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Other	

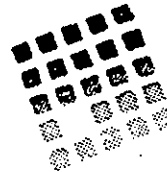
NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Other	

Binders 53Abundant Gypsum, fine grained aggregateEFFERVESCENCE: None - weak in isolated areas

COMMENTS:

NSD



MATERIALS ANALYTICAL SERVICES, INC.
3597 Parkway Lane, Suite 250
Norcross, GA 30092
404/448-3200

TEM ANALYSIS: BULK ANALYSIS

PROJECT: PRUDENTIAL SOUTHDAL E OFFICE COMPLEX 120.61
SAMPLE NUMBER: M2468-14
SAMPLE ID: #14 PARKING GARAGE ABOVE STALL #40

DATE OF ANALYSIS: 8/20/90

ANALYST: W. B. Egelund

Asbestos Minerals: CHRYSOTILE (EDS)(DIFF)

Other Components: VERMICULITE (EDS)
GYPSUM (EDS)(DIFF)
CALCITE (EDS)(DIFF) * TRACE OBSERVED

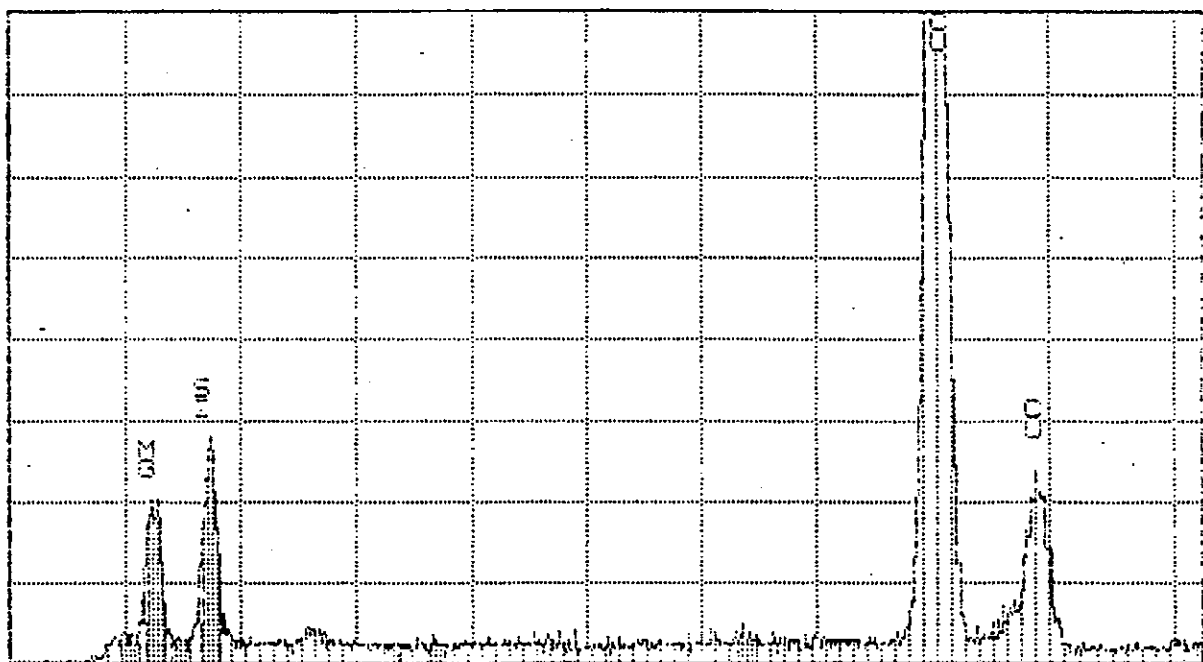
Comments:

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 17:51

Cursor: 0.000keV = 0

ROI (SiK α) 1.650: 1.810=1005



0.000

VFS = 256

10.240

17

M2468-14, CHRYSOTILE

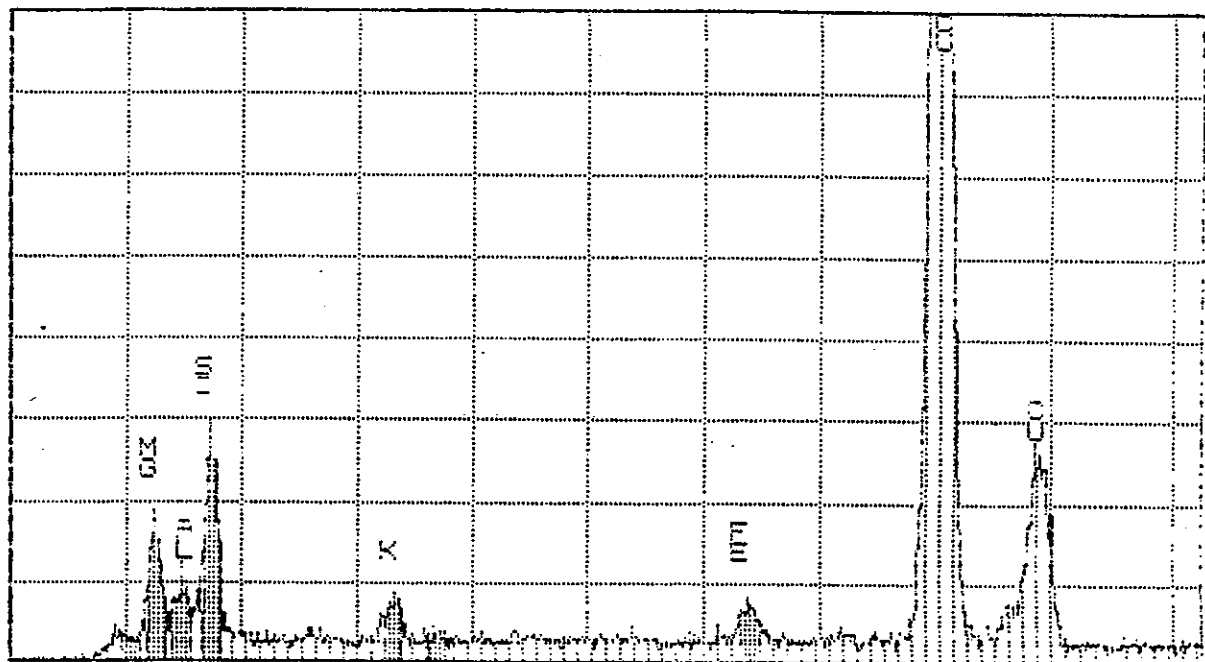
PIS 00111072

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 17:55

Cursor: 0.200KeV = 0

ROI (SiK α) 1.660: 1.810-1040



0.000

VFS = 256

10.240

22

M2468-14, VERMICULITE

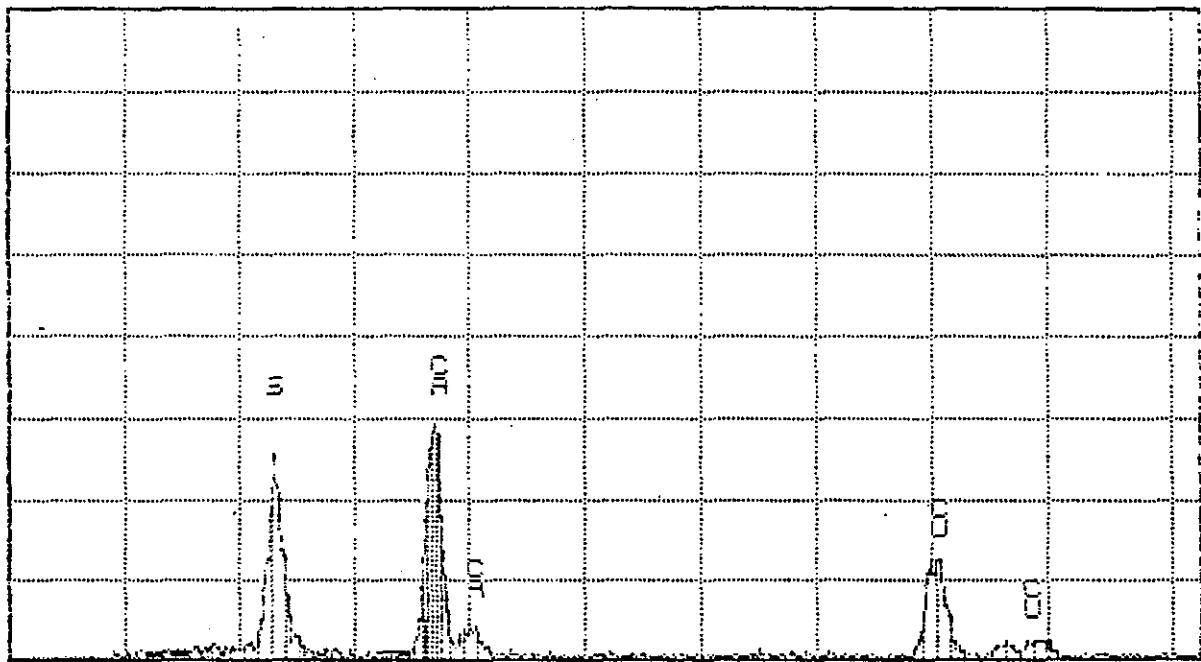
PIS 00111073

MATERIALS ANALYTICAL SERVICES

MON 20-AUG-90 17:56

Cursor: 0.000keV = 0

ROI (SiKa) 1.550: 1.810=77



0.000

VFS = 256

10.240

S

M2468-14, GYPSUM

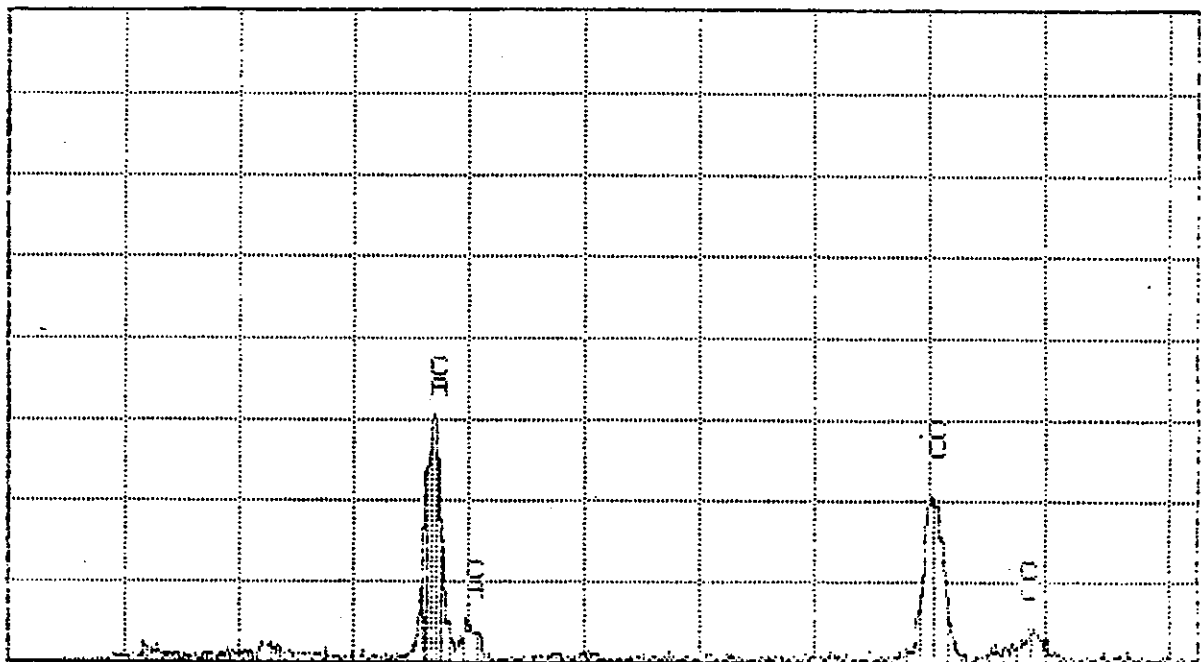
PIS 00111074

MATERIALS ANALYTICAL SERVICES

MON 22-AUG-90 17:58

Cursor: 0.000keV = 0

ROI (SIKα) 1.650: 1.810-39



0.220

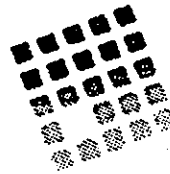
WFS = 256

10.242

4

M2468-14, CALCITE

PIS 00111075



MATERIALS
ANALYTICAL
SERVICES

ADDITIONAL BULK ANALYSIS

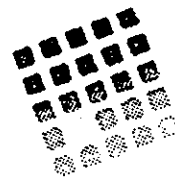
Sample # M2468-14

Analyst J. K. R.

Date 08/15/90

ACID DISSOLUTION

(1) Petri dish plus sample:	<u>8.8997</u> g
(2) Petri dish minus sample:	<u>7.9071</u> g
(3) Original sample weight:	<u>0.9926</u> g
(4) Filter weight:	<u>0.0577</u> g
(5) Clean petri dish weight:	<u>7.3645</u> g
(6) Final sample weight plus filter and petri dish:	<u>7.8404</u> g
(7) Final sample wt: ((6) - [(4) + (5)])	<u>0.4182</u> g
 (8) Percent residue wt: ((7)/(3) x 100)	<u>42.1</u> %
(9) Amount in solution: (100 - (8))	<u>57.9</u> %



MATERIALS
ANALYTICAL
SERVICES

ADDITIONAL BULK ANALYSIS

STARCH VERIFICATION

Sample # M2468-14

Analyst V.B. Egel

Date 8/17/90

1) Sample Analyzed before after acid dissolutions

Starch observed

no ✓

yes _____

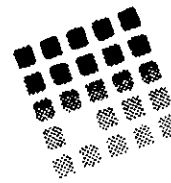
Iodine test
(ceiling tile only)

positive _____

negative _____

PIS 00111077

3597 Parkway Lane • Suite 250
Norcross, Georgia 30092
(404) 448-3200



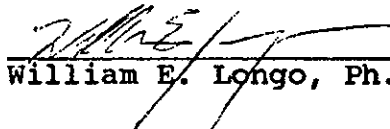
MATERIALS
ANALYTICAL
SERVICES

June 25, 1990

Re: Southdale Office Center
Edina, Minnesota

Based on the constituent analysis of the fireproofing samples for the above-referenced project, it is my opinion that the samples analyzed are Mono-Kote 3, which was manufactured by W. R. Grace.

Worksheets reflecting our analysis are attached.


William E. Longo, Ph.D.

PIS 00060987

3597 Parkway Lane • Suite 250
Norcross, Georgia 30092
(404) 448-3200 FAX (404) 368-8256

BUILDING: Southdale Office Center
Edina, MN

The following bulk samples from the above-referenced buildings were analyzed and were used to form an opinion of the manufacturer and product.

<u>Bulk Sample #</u>	<u>Sample Location</u>	<u>Collected By</u>
1	7th Floor, Suite 735	IEA
2	7th Floor, Suite 735	IEA
3	7th Floor, Suite 735	IEA
4	7th Floor, Suite 735	IEA
5	7th Floor, Suite 735	IEA
6	7th Floor, Suite 735	IEA
7	7th Floor, Suite 735	IEA
8	7th Floor, Suite 735	IEA
9	7th Floor, Suite 735	IEA
10	7th Floor, Suite 735	IEA
11	7th Floor, Suite 735	IEA
12	7th Floor, Suite 735	IEA
13	7th Floor, East Wing	IEA
14	7th Floor, East Wing	IEA
15	7th Floor, East Wing	IEA
16	7th Floor, East Wing	IEA
17	7th Floor, East Wing	IEA

Page -2-
Southdale Office Center

18	7th Floor, East Wing	IEA
19	7th Floor, East Wing	IEA
20	7th Floor, East Wing	IEA
21	7th Floor, South Wing	IEA
22	7th Floor, South Wing	IEA
23	7th Floor, South Wing	IEA
24	7th Floor, South Wing	IEA
25	7th Floor, South Wing	IEA
26	7th Floor, South Wing	IEA
27	7th Floor, South Wing	IEA
28	7th Floor, South Wing	IEA
29	Basement Storage	IEA
30	Suite 165	IEA
31	Suite 555	IEA

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2971-1Date: 6/12/89Project Name: Law Assoc. / AILAnalyst: AdmSample Identification: Pis. 00609 - 375A71AReviewer: AdmGross Visual Description: Beige, fibrous, fine grained matrix with gold
flakes and Dooks

Optical Data for Asbestos Identification

Morphology	<u>Wavy</u>	. . . . .	_____
Pleochroism	<u>NO</u>	. . . . .	_____
Refractive Index	<u>1.5511 1.541</u>	. . . . .	_____
Sign of Elongation . . . . .	<u>+</u>	. . . . .	_____
Extinction	<u>0</u>	. . . . .	_____
Birefringence	<u>low</u>	. . . . .	_____
Melt	<u>NO</u>	. . . . .	_____
Fiber Name	<u>Chrysotile</u>	. . . . .	_____

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	<u>12</u>
Amosite	_____
Crocidolite	_____
Tremolite/Actinolite	_____
Anthophyllite	_____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	_____
Fibrous glass	_____
Cellulose	_____
Synthetic	_____
Talc	_____

NON-FIBROUS COMPONENTS:

Perlite	_____
Vermiculite	<u>35</u>
Mica	_____
Quartz	_____
Calcite	_____
Gypsum	_____
Diatoms	_____
Other	_____

Binders	<u>53</u>
<u>Gypsum common - some carbonate present</u>	

EFFERVESCENCE: Weak - Moderate

COMMENTS:

ALSO

MATERIALS ANALYSIS SHEET

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-2Date: 6/16/89Project Name: Law Assoc. / ATLAnalyst: JhmSample Identification: PISA 00609 - 375A 71 B

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.54155
Sign of Elongation	+
Extinction	0
Birefringence	Low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders	53
Gypsum Common - some Carbonate present	

EFFERVESCENCE: weak - moderateCOMMENTS: NSO

PIS 00060991

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2972-3Date: 6/16/88Project Name: Law Assoc / ATLAnalyst: ghSample Identification: PISA 00609 - 375A71CReviewer: ghGross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.54 / 1.55
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders	53
Gypsum Common - Some Carbonate present	

EFFERVESCENCE: weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M297Z-4Date: 6/16/89Project Name: Law Assoc. / ATLAnalyst: JH
Reviewer: JHSample Identification: Pusa 00609 - 3754710Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.541-1.551
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders	53
Gypsum common - some carbonate present	

EFFERVESCENCE: Weak - moderateCOMMENTS: NSD

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-5

Date: 6/17/89

Project Name: Law Assoc. / ATL

Analyst: gm
Reviewer: gm

Sample Identification: PIISA 00609 375A 72 A

Gross Visual Description: Beige, fibrous, fine grained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	<u>Wavy</u>
Pleochroism	<u>NO</u>
Refractive Index	<u>1.54-1.55</u>
Sign of Elongation	<u>+</u>
Extinction	<u>0</u>
Birefringence	<u>Low</u>
Melt	<u>NO</u>
Fiber Name	<u>Chrysotile</u>

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	<u>12</u>
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	<u>35</u>
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53
Gypsum common - scattered grains of carbonate present

EFFERVESCENCE: weak - moderate

COMMENTS:

NISD

MATERIALS ANALYSIS REPORT

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-6Date: 6/6/89Project Name: Law Assoc. / AILAnalyst: JMSample Identification: PUSA map 375A 72B

Reviewer: _____

Gross Visual Description: Beige, fibrous, fine grained matrix with gold flakes and pools

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	ND
Refractive Index	1.54-1.55
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	ND
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders	53
Gypsum Common - scattered grains of carbonate present	

EFFERVESCENCE: weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972 - 7Date: 6/17/89Project Name: Law Assoc / ATLAnalyst: ghSample Identification: Pisa 00609 375A-72C

Reviewer: _____

Gross Visual Description: Beige, fibrous, fine grained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	many
Pleochroism	no
Refractive Index	1.546 - 1.551
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53Gypsum common - scattered grains of carbonate presentEFFERVESCENCE: weak - moderateCOMMENTS: NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-8Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: Jhm
Reviewer: JhmSample Identification: Prisc 00609 375A-72DGross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.54 / 1.55
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders: 53
Gypsum common - scattered grains of carbonate presentEFFERVESCENCE: weak to moderate

COMMENTS:

N50

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-9Date: 6/17/89Project Name: Law Assoc / ATLAnalyst: Jhm
Reviewer: _____Sample Identification: Pusa 00609 375A 73AGross Visual Description: Beige, fibrous, finegrained matrix with
gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.55, 1.54
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53
Gypsum common - scattered grains of carbonate present.EFFERVESCENCE: weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M297270Date: 6/17/89Project Name: Law Assoc./ATL.Analyst: John
Reviewer: Sample Identification: Prusa 00609 375A 73BGross Visual Description: Beige, fibrous, finegrained material with
gold flakes and bubbles

Optical Data for Asbestos Identification

Morphology	.....	wavy	.....
Pleochroism	.....	no	.....
Refractive Index	.....	1.54/1.55	.....
Sign of Elongation	.....	+	.....
Extinction	.....	0	.....
Birefringence	.....	low	.....
Melt	.....	no	.....
Fiber Name	.....	chrysotile	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	12
Amosite	.....
Crocidolite	.....
Tremolite/Actinolite	.....
Anthophyllite	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....
Fibrous glass	.....
Cellulose	.....
Synthetic	.....
Talc	.....

NON-FIBROUS COMPONENTS:

Perlite	.....
Vermiculite	.....
Mica	.....
Quartz	.....
Calcite	.....
Gypsum	.....
Diatoms	.....
Other	.....

Binders: 53
Gypsum (common) - scattered grains of carbonate presentEFFERVESCENCE: weak - moderateCOMMENTS: also

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-11Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: gjmSample Identification: Pusa 00609 375A 736Reviewer: gjmGross Visual Description: Beige, fibrous, fine grained matrix with gold flakes and flocks

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.54-1.5511
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders: 53
Gypsum Common - scattered grains of Calcite PresentEFFERVESCENCE: Weak - moderate

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2972-12Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: JhmSample Identification: Pisa 00609 375A 730

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.54 / 1.551
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	85
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53Gypsum Common - Scattered grains of Carbonate PresentEFFERVESCENCE: Weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-13Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: JMSample Identification: Prisa 60609 375A 67AReviewer: JMGross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	<u>Wavy</u>
Pleochroism	<u>NO</u>
Refractive Index	<u>1.54-1.55</u>
Sign of Elongation	<u>+</u>
Extinction	<u>0</u>
Birefringence	<u>low</u>
Melt	<u>NO</u>
Fiber Name	<u>Chrysotile</u>

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	<u>12</u>
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	<u>3.5</u>
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53Gypsum common - scattered grains of carbonate presentEFFERVESCENCE: weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-14Date: 6/17/89Project Name: Law Ass't. / ATLAnalyst: JhmSample Identification: Pr. 00009 375A 67B

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.54-1.55
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders: Gypsum Common - 53
scattered grains of carbonate PresentEFFERVESCENCE: Weak - moderate

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-15Date: 6/17/89Project Name: Low Assoc #1A1LAnalyst: JMSample Identification: Pr. su 6060a 375A 67C

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold
flakes and booksOptical Data for Asbestos Identification

Morphology	<u>Wavy</u>	_____	_____
Pleochroism	<u>no</u>	_____	_____
Refractive Index	<u>1.55 // 1.54</u>	_____	_____
Sign of Elongation	<u>+</u>	_____	_____
Extinction	<u>0</u>	_____	_____
Birefringence	<u>low</u>	_____	_____
Melt	<u>no</u>	_____	_____
Fiber Name	<u>chrysotile</u>	_____	_____

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	<u>12</u>
Amosite	_____
Crocidolite	_____
Tremolite/Actinolite	_____
Anthophyllite	_____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	_____
Fibrous glass	_____
Cellulose	_____
Synthetic	_____
Talc	_____

NON-FIBROUS COMPONENTS:

Perlite	_____
Vermiculite	<u>35</u>
Mica	_____
Quartz	_____
Calcite	_____
Gypsum	_____
Diatoms	_____
Other	_____

Binders 53
Gypsum common - scattered grains of carbonate presentEFFERVESCENCE: weak - moderateCOMMENTS: NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-16Date: 6/17/89Project Name: Law Assoc 777LAnalyst: JPMSample Identification: Prism 00609 375 A 670Reviewer: JPMGross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.54-1.55
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53
Gypsum common - scattered grains of Carbonate PresentEFFERVESCENCE: Weak - moderateCOMMENTS: NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-17Date: 6/17/89Project Name: Law Assoc. 7ATL.Analyst: JhnSample Identification: Prisa 00609 375A 68A

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and bodiesOptical Data for Asbestos Identification

Morphology	.....	<u>wavy</u>	.....	.....
Pleochroism	.....	<u>NO</u>	.....	.....
Refractive Index	.....	<u>1.54 + 1.5511</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	_____
Crocidolite	.....	_____
Tremolite/Actinolite	.....	_____
Anthophyllite	.....	_____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....	_____
Fibrous glass	.....	_____
Cellulose	.....	_____
Synthetic	.....	_____
Talc	.....	_____

NON-FIBROUS COMPONENTS:

Perlite	.....	_____
Vermiculite	.....	<u>35</u>
Mica	.....	_____
Quartz	.....	_____
Calcite	.....	_____
Gypsum	.....	_____
Diatoms	.....	_____
Other	.....	_____

Binders	.....	<u>53</u>
<u>Gypsum common - scattered grains of Calcite present</u>		

EFFERVESCENCE: Weak - moderateCOMMENTS: NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-18Date: 6/17/99Project Name: Law Assoc. / ATLAnalyst: Jhm
Reviewer: JhmSample Identification: Pisa 00609 375A 68BGross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.546 / 1.5511
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53
Gypsum Common - Scattered grains of carbonate presentEFFERVESCENCE: weak - moderate

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-19Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: JhmSample Identification: Pr. 3a 00609 375A 68C

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	no
Refractive Index	1.541-1.551
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	35
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders

53

Gypsum common - scattered grains of calcite present.EFFERVESCENCE: weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-20Date: 6/17/89Project Name: Law Assoc. / A.T.C.Analyst: Jhm
Reviewer: JhmSample Identification: Pisa 00609 375A-680Gross Visual Description: Beige, fibrous, fine grained matrix with gold flakes and pores

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.54-1.55/1
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	3.5
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders	53
Gypsum Common - Scattered grains of Calcite present	

EFFERVESCENCE: Weak - Moderate

COMMENTS:

Also

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-21Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: JohnSample Identification: Poss 375A - 69A

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy	_____	_____
Pleochroism	no	_____	_____
Refractive Index	1.546/1.5511	_____	_____
Sign of Elongation	+	_____	_____
Extinction	0	_____	_____
Birefringence	low	_____	_____
Melt	no	_____	_____
Fiber Name	Chrysotile	_____	_____

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	_____
Crocidolite	_____
Tremolite/Actinolite	_____
Anthophyllite	_____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	_____
Fibrous glass	_____
Cellulose	_____
Synthetic	_____
Talc	_____

NON-FIBROUS COMPONENTS:

Perlite	_____
Vermiculite	35
Mica	_____
Quartz	_____
Calcite	_____
Gypsum	_____
Diatoms	_____
Other	_____

Binders 53Gypsum Common - Scattered grains of Carbonate presentEFFERVESCENCE: Weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 297Z-22Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: Jhm
Reviewer: _____Sample Identification: Pisa 375A-69BGross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and booksOptical Data for Asbestos Identification

Morphology	.....	<u>Wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.541 - 1.551</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>Chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	_____
Crocidolite	.....	_____
Tremolite/Actinolite	.....	_____
Anthophyllite	.....	_____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....	_____
Fibrous glass	.....	_____
Cellulose	.....	_____
Synthetic	.....	_____
Talc	.....	_____

NON-FIBROUS COMPONENTS:

Perlite	.....	_____
Vermiculite	.....	<u>35</u>
Mica	.....	_____
Quartz	.....	_____
Calcite	.....	_____
Gypsum	.....	_____
Diatoms	.....	_____
Other	.....	_____

Binders

53
Gypsum common - scattered grains of Carbonate presentEFFERVESCENCE; Weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972-23Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: JhmSample Identification: Pisa 375A - 69 C

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	.....	<u>wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.541 1.551</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	.....
Crocidolite	.....	.....
Tremolite/Actinolite	.....	.....
Anthophyllite	.....	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....	.....
Fibrous glass	.....	.....
Cellulose	.....	.....
Synthetic	.....	.....
Talc	.....	.....

NON-FIBROUS COMPONENTS:

Perlite	.....	.....
Vermiculite	.....	<u>35</u>
Mica	.....	.....
Quartz	.....	.....
Calcite	.....	.....
Gypsum	.....	.....
Diatoms	.....	.....
Other	.....	.....

Binders: 53
Gypsum common - Scattered grains of carbonate present.EFFERVESCENCE: Weak - moderateCOMMENTS: NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M 2972 - 24Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: JhmSample Identification: Pisa 375A - 69D

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	.....	Wavy	.....
Pleochroism	.....	no	.....
Refractive Index	.....	1.541 1.5511	.....
Sign of Elongation	.....	+	.....
Extinction	.....	0	.....
Birefringence	.....	low	.....
Melt	.....	no	.....
Fiber Name	.....	Chrysotile	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	12
Amosite	.....
Crocidolite	.....
Tremolite/Actinolite	.....
Anthophyllite	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....
Fibrous glass	.....
Cellulose	.....
Synthetic	.....
Talc	.....

NON-FIBROUS COMPONENTS:

Perlite	.....
Vermiculite	.....
Mica	.....
Quartz	.....
Calcite	.....
Gypsum	.....
Diatoms	.....
Other	.....

Binders: 53
Gypsum common - scattered grains of carbonate presentEFFERVESCENCE: Weak - moderate

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2972 - 25Date: 6/17/89Project Name: Law Assoc. / ATLAnalyst: JhmSample Identification: Prism 375A - 70A

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	<u>wavy</u>
Pleochroism	<u>no</u>
Refractive Index	<u>1.541-1.551</u>
Sign of Elongation	<u>+</u>
Extinction	<u>0</u>
Birefringence	<u>low</u>
Melt	<u>no</u>
Fiber Name	<u>chrysotile</u>

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	<u>12</u>
Amosite	_____
Crocidolite	_____
Tremolite/Actinolite	_____
Anthophyllite	_____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	_____
Fibrous glass	_____
Cellulose	_____
Synthetic	_____
Talc	_____

NON-FIBROUS COMPONENTS:

Perlite	_____
Vermiculite	<u>35</u>
Mica	_____
Quartz	_____
Calcite	_____
Gypsum	_____
Diatoms	_____
Other	_____

Binders 53Gypsum common - scattered grains of Carbonate presentEFFERVESCENCE: Weak - moderate

COMMENTS:

NSD

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2971-26Date: 8/17/89Project Name: Law Assoc / ATLAnalyst: ghmSample Identification: Prisa 375A-70B

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	.....	<u>wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.54 ± 1.55</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>Chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	.....
Crocidolite	.....	.....
Tremolite/Actinolite	.....	.....
Anthophyllite	.....	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....	.....
Fibrous glass	.....	.....
Cellulose	.....	.....
Synthetic	.....	.....
Talc	.....	.....

NON-FIBROUS COMPONENTS:

Perlite	.....	.....
Vermiculite	.....	<u>35</u>
Mica	.....	.....
Quartz	.....	.....
Calcite	.....	.....
Gypsum	.....	.....
Diatoms	.....	.....
Other	.....	.....

Binders 53Gypsum common - scattered grains of carbonate presentEFFERVESCENCE: weak - moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2972-27Date: 6/17/89Project Name: Low Assoc / ATLAnalyst: Jhm
Reviewer: _____Sample Identification: Prism 375A-70CGross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and flocks

Optical Data for Asbestos Identification

Morphology	.....	<u>wavy</u>	.....	.....
Pleochroism	.....	<u>no</u>	.....	.....
Refractive Index	.....	<u>1.55 // 1.54</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>0</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>Chrysotile</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	<u>12</u>
Amosite	.....	_____
Crocidolite	.....	_____
Tremolite/Actinolite	.....	_____
Anthophyllite	.....	_____

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....	_____
Fibrous glass	.....	_____
Cellulose	.....	_____
Synthetic	.....	_____
Talc	.....	_____

NON-FIBROUS COMPONENTS:

Perlite	.....	_____
Vermiculite	.....	<u>35</u>
Mica	.....	_____
Quartz	.....	_____
Calcite	.....	_____
Gypsum	.....	_____
Diatoms	.....	_____
Other	.....	_____

Binders 53Gypsum common - scattered grains of carbonate presentEFFERVESCENCE: weak - moderate

COMMENTS:

ASO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M2971-28Date: 6/17/89Project Name: Law Assoc. / HILAnalyst: JohnSample Identification: Pisa 375A - 700

Reviewer: _____

Gross Visual Description: Beige, fibrous, finegrained matrix with gold flakes and books

Optical Data for Asbestos Identification

Morphology	Wavy
Pleochroism	NO
Refractive Index	1.541-1.551
Sign of Elongation	+
Extinction	0
Birefringence	low
Melt	NO
Fiber Name	Chrysotile

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	12
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	
Fibrous glass	
Cellulose	
Synthetic	
Talc	

NON-FIBROUS COMPONENTS:

Perlite	
Vermiculite	55
Mica	
Quartz	
Calcite	
Gypsum	
Diatoms	
Other	

Binders 53Gypsum common - scattered grains of Carbonate PresentEFFERVESCENCE: weak-moderate

COMMENTS:

NSO

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M4334-5Date: 6/27/90Project Name: PRUDENTIAL: SOUTH DALE OFFICE COMPLEXAnalyst: W.B. EgleSample Identification: 5-051 FIREPROOFING; BSMT STORAGE, BLDG 6800120.61Gross Visual Description: LIGHT PEIGE, GOLD FLAKES AND BOORS AS WELL
AS FIBERS BOUND BY AN ABUNDANT FINE MATRIX.

Optical Data for Asbestos Identification

Morphology	WAVEY			
Pleochroism	NONE			
Refractive Index	(4/11) 1.54/1.55			
Sign of Elongation	+			
Extinction	parallel			
Birefringence	LOW			
Melt	No			
Fiber Name	CHRYSTILE			

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile 10

Amosite

Crocidolite

Tremolite/Actinolite

Anthophyllite

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool

Fibrous glass

Cellulose

Synthetic

Other

NON-FIBROUS COMPONENTS:

Perlite

Vermiculite 37

Other

Binders 53

ABUNDANT GYPSUM WITH FINE GRANULAR CARBONATE AND QUARTZ
SEEN RANDOMLY THROUGHOUT.

EFFERVESCENCE: WEAK

COMMENTS:

NO STARCH OBSERVED

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: 7 4334-6Date: 6/27/90Project Name: PRUDENTIAL: SOUTH DALE OFFICE COMPLEXAnalyst: W.B. EganSample Identification: 6 - OS1 FIREPROOFING SUITE 165, BLDG 6800.Gross Visual Description: LIGHT BEIGE, GOLD FLAKES AND BOOBS AS WELL AS FIBERS BOUND BY AND ABUNDANT FINE MATRIX.

Optical Data for Asbestos Identification

Morphology	.....	WAVEY	.....
Pleochroism	.....	NO NG	.....
Refractive Index	.....	(2.11) 1.54/1.55	.....
Sign of Elongation	.....	+	.....
Extinction	.....	parallel	.....
Birefringence	.....	Low	.....
Melt	.....	NO	.....
Fiber Name	.....	CHRYSTILE	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile	.....	10
Amosite	.....
Crocidolite	.....
Tremolite/Actinolite	.....
Anthophyllite	.....

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool	.....
Fibrous glass	.....
Cellulose	.....
Synthetic	.....
Other	.....

NON-FIBROUS COMPONENTS:

Perlite	.....
Vermiculite	.....	35
Other	.....

Binders	55
---------	-------	----

ABUNDANT GYPSUM WITH FINE GRANULAR CARBONATE AND QUARTZ OBSERVED THROUGHOUT.

EFFERVESCENCE: WEAK

COMMENTS:

NO STARCH OBSERVED

MATERIALS ANALYTICAL SERVICES, INC.

BULK ASBESTOS SHEET

Project # - Spl #: M4334-7 Date: 6/27/90
 Project Name: PRUDENTIAL: SOUTHDALE OFFICE COMPLEX Analyst: W.D. Egle
 Sample Identification: 7.051 FIREPROOFING, SUITE 555, ALDG 6800

Gross Visual Description: LIGHT BEIGE. GOLD FLAKED AND LOOKS AS
IF AS FIBERS BOUND BY AN ABUNDANT FINE MATRIX.

Optical Data for Asbestos Identification

Morphology	.....	<u>WAUZY</u>	.....	.....
Pleochroism	.....	<u>NONE</u>	.....	.....
Refractive Index	.....	<u>(LH) 1.54/1.55</u>	.....	.....
Sign of Elongation	.....	<u>+</u>	.....	.....
Extinction	.....	<u>parallel</u>	.....	.....
Birefringence	.....	<u>low</u>	.....	.....
Melt	.....	<u>no</u>	.....	.....
Fiber Name	.....	<u>CHRYSTOLE</u>	.....	.....

ASBESTOS MINERALS:

Est. Vol. %

Chrysotile 10
 Amosite
 Crocidolite
 Tremolite/Actinolite
 Anthophyllite

OTHER FIBROUS COMPONENTS:

Mineral/Rock wool
 Fibrous glass
 Cellulose
 Synthetic
 Other

NON-FIBROUS COMPONENTS:

Perlite
 Vermiculite 37
 Other

Binders 53

ABUNDANT GYPSUM WITH CARBONATE AND SMALL AMOUNTS OF SILTY
QUARTZ SCATTERED THROUGHOUT.

EFFERVESCENCE: WEAK

COMMENTS:

NO STARCH OBSERVED.

RECEIVED
NOV 1 1989

MATERIALS ANALYTICAL SERVICES, INC.
3597 Parkway Lane
Suite 250
Norcross, GA 30092

TEM Analysis Type: Binder

Project Number/
Sample Number: M-2971-1

Project Name: South Dale

Sample
Identification: 00609 - 3257 714

Analyst/ 6/25/89
Date: Longo

Asbestos Minerals:

Chrysotile (dth/EDS)

Non-Asbestos Components:

Vermiculite (dth/EDS)
Gypsum (EDS)
Calcite (EDS) small amount

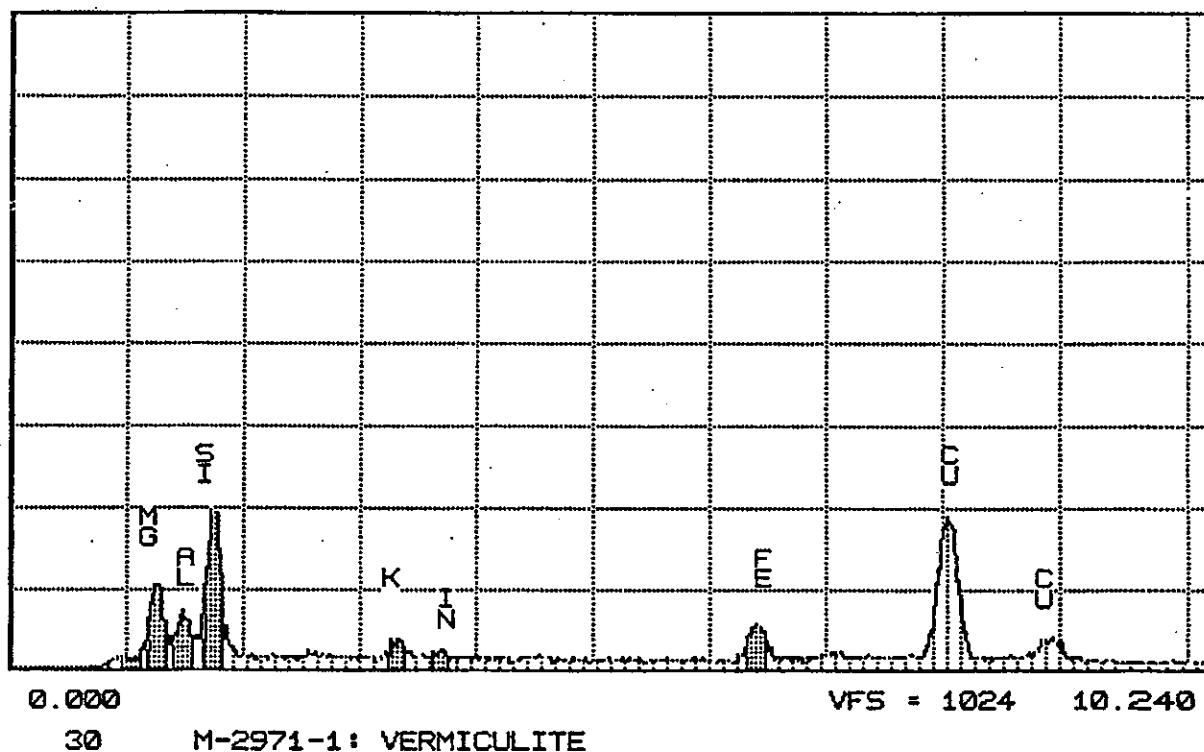
Comments: _____

MATERIALS ANALYTICAL SERVICES

SUN 25-JUN-89 12:36

Cursor: 0.000keV = 0

ROI (SIK α) 1.650: 1.810=3019



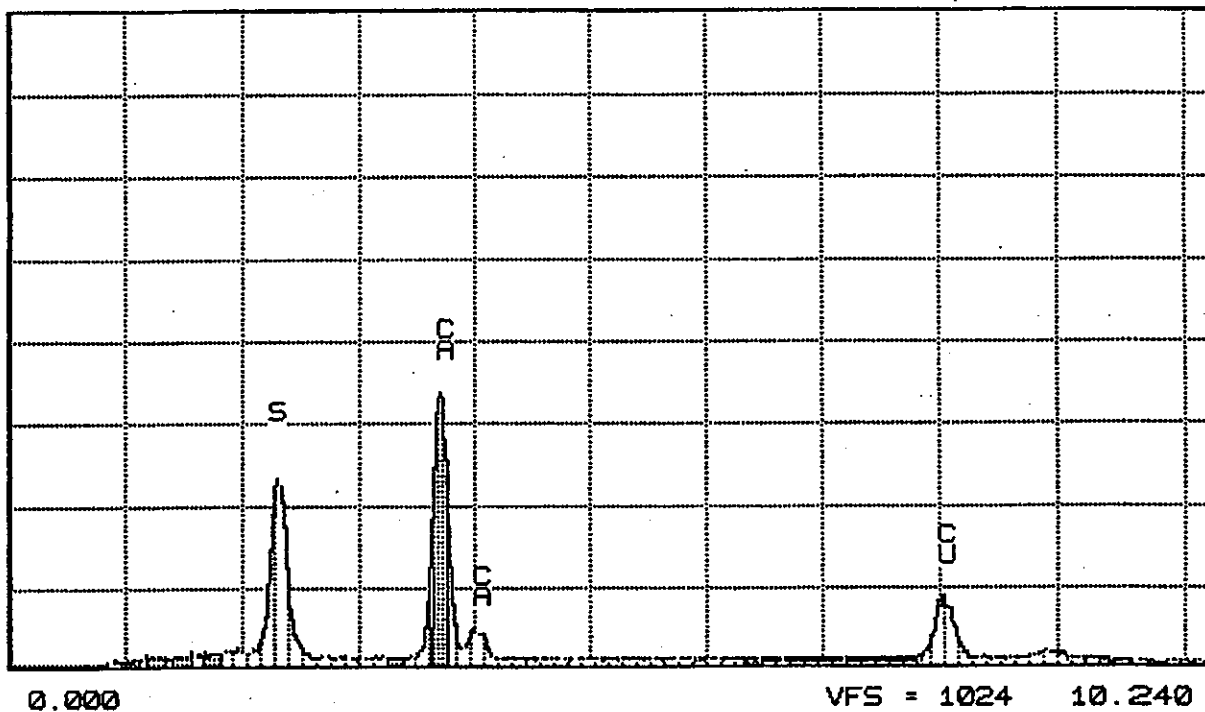
PIS 00061022

MATERIALS ANALYTICAL SERVICES

SUN 25-JUN-89 12:38

Cursor: 0.000keV = 0

ROI (SIK α) 1.660: 1.810=306



0.000

VFS = 1024 10.240

20

M-2971-1: GYPSUM

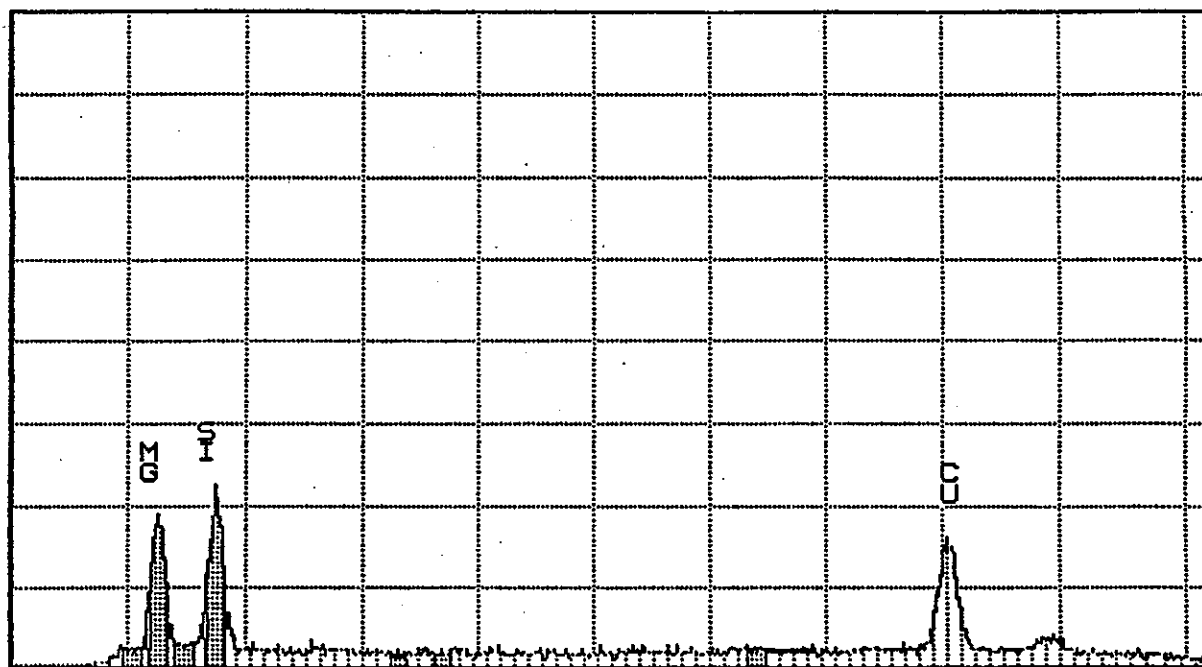
PIS 00061023

MATERIALS ANALYTICAL SERVICES

SUN 25-JUN-89 12:40

Cursor: 0.000keV = 0

ROI (SIKα) 1.660: 1.810=1615



0.000

VFS = 512

10.240

35

M-2971-1: CHRYSOTILE

PIS 00061024

M.A.S.
3597 PARKWAY LANE
MORCROSS GA. 30092

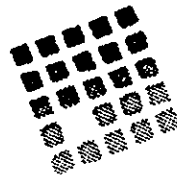
ACID DISSOLUTION BULK ANALYSIS

ANALYSIS USING 2% SOLUTION HCL

DATE 6/25/89

A.P.E.

No.	SAMPLE #	P-D + SAMPLE	P-D - SAMPLE	SAMPLE WEIGHT	FILTER WEIGHT	FINAL WT + FILTER	FINAL WT - FILTER	PERCENT FINAL WT	AMOUNT IN SOLU.
1	M2971-1	8.8778g	7.5723g	1.3055g	0.0173g 7.5365g	7.9911g	0.4354g	33.47.	66.62
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									



MATERIALS
ANALYTICAL
SERVICES

ADDITIONAL BULK ANALYSIS

STARCH VERIFICATION

Sample # M2971-1

Analyst W.B. Eichel

Date 6/23/90

1) Sample Analyzed before after acid dissolutions

Starch observed

no ☒
yes ☐

Iodine test
(ceiling tile only)

positive ☐

negative ☐

PIS 00061026

3597 Parkway Lane • Suite 250
Norcross, Georgia 30092
(404) 448-3200

EXHIBIT C